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ABSTRACT

Three papers focusing on various aspects of nontraditional postsecondary education, are presented in this volume. The first paper by Cross and Zusman explores the issue of nontraditional population needs and associated program responses. The second paper, by Bowen, Edelstein, and Medsker, focuses on the kinds of information that decisionmakers in nontraditional postsecondary education need and use. Finally, the third paper, by Ruyle and Watkins, explores specific kinds of data that might be obtained and the instrumentation to obtain them in an actual field evaluation of nontraditional postsecondary education. The appendixes to the papers provide descriptions of studies focusing on characteristics and needs of adult learners. (JH)

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AN EVALUATIVE LOOK AT NONTRADITIONAL POSTSECONDARY EDUCATION

ED176106

Papers Prepared in 1977 by

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Preface

Charles B. Stalford, National Institute of Education

The papers in this volume are intended to be a resource to those involved with either the policy or administration of "nontraditional" postsecondary education. They were prepared in 1977 by staff at the Center for Research and Development in Higher Education, University of California, Berkeley under contract to the National Institute of Education.

The phrase "nontraditional" postsecondary education has many meanings. It may apply to the programs offered, the populations served, or both. Considerable diversity exists about the meaning of "non-traditional" postsecondary education, even within the two foci of programs and populations. Dr. Patricia Cross, for example, comments about this diversity in non-traditional programs:

> "Programs flying under the nontraditional banner today range all the way from this example of a unidimensional program" (a standard evening college for adults)"—nontraditional only with respect to scheduling—to multidimensional nontraditional programs that are unconventional with respect to location, schedule, students, faculty, methods of instruction, and curricular content".

When applied to student populations, "nontraditional" generally refers to previously underserved groups, such as ethnic or racial minorities of traditional college-attending age. Or it might refer to a wide range of adult populations, including housewives and older persons returning to school in increasing numbers. These categories are not clearly separable—a diversity of nontraditional student populations can be seen to exist.

The papers discuss both nontraditional programs and populations. The nontraditional populations focused upon are adult, part-time learners who typically have had some interruptions in their formal, full-time schooling.

As noted by Dr. Leland Medsker *et al.* in an earlier study (1975), the move to extend college opportunities to mature adults was accelerating in the early 1970's. In funding the Center for Research and Development in Higher Education at Berkeley to study nontraditional postsecondary education, NIE's objective, in large part, was to update the picture of the field gathered just a few years previously.

The three papers herein discuss different aspects of nontraditional postsecondary education. The paper by Dr. Cross and Ami Zusman thoroughly explores the issue of nontraditional population needs and associated program responses. The paper by Frank Bowen, Steward Edelstein and Dr. Medsker focuses on the kinds of information decisionmakers in nontraditional postsecondary education need and use. The paper contains some provocative and not very reassuring conclusions for those interested in increasing the utilization of social science information generally.

The paper by Janet Ruyle and Dr. Richard Watkins is helpful in exploring specific kinds of data that might be obtained and instrumentation to obtain them in an actual field evaluation of nontraditional postsecondary education. Note that both this paper and the one by Bowen, Edelstein, and Medsker dis-

cuss issues related to nontraditional degree programs at the associate and baccalaureate levels only. This emphasis is in keeping with the initial parameters of the NIE project.

The Cross and Zusman paper, however, goes beyond degree programs to discuss the needs of adult learners generally. The reasons cited for the wider scope adopted in this paper include the relatively small percentage of part-time adult learners in *degree* programs ("less than 10%") and the broad definition of adult learning needs–extending beyond institutional characteristics–embodied in the state and national level needs surveys discussed.

The reader will therefore find the Cross and Zusman paper useful in the broader context of the lifelong learning concept now reaching prominence, as well as within the context of nontraditional education.[1] While the other two papers have obvious relevance to broader lifelong learning considerations, the reader will find them particularly interesting in the context of trends in nontraditional postsecondary education degree programs of the kind previously surveyed by Dr. Medsker.

The National Institute of Education is pleased to make these papers publicly available. Comments on issues raised herein may be directed to Charles B. Stalford, National Institute of Education, 1200 19th Street, N.W., Washington, D.C. 20208.

[1] Dr. Cross prepared a briefer version of this paper, which also included a discussion of barriers to learning, for a 1977 NIE conference on adult learning needs and the future demand for lifelong learning. See Cross, 1978, under "References" for details.

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IN MEMORIAM

LELAND L. MEDSKER
1905-1978

Dr. Medsker was a Co-Director of the project which generated these papers.

His career encompassed many years of distinguished service in post-secondary education. He was a teacher and administrator as well as researcher, most notably in the areas of community college and non-traditional education.

Dr. Medsker was a founder of the Center for Research and Development in Higher Education at the University of California, Berkeley, and was its Director from 1967 until 1972, when he assumed emeritus status.

This project constituted Lee's last professional commitment. The National Institute of Education is privileged to have been associated with his work.

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THE NEEDS OF NONTRADITIONAL LEARNERS AND THE RESPONSE OF NONTRADITIONAL PROGRAMS

K. Patricia Cross
Ami Zusman

Center for Research and Development in Higher Education
University of California, Berkeley

June 1977

1. Introduction—Defining the Task

The answer to the question, how well does education serve the needs of individuals and society, has become steadily more complex. One hundred years ago, educational "needs" and "desires" could be satisfied through teaching people the basic skills of reading, writing, and arithmetic at a fairly elementary level that would enable people to communicate in a basically agricultural society that did not need much communication. Today, the educational needs of society are complex; the needs and desires of learners are terribly diverse; and the citizenry to be served is everyone. How then does one start to answer the question, how well does education serve the needs of adult learners?

The first giant step in delimitation has been taken in the NIE work statement which calls for addressing the question, how well do non-traditional post-secondary external degree programs serve the needs of non-traditional students? Although there is considerable flexibility in the NIE work statement regarding the definition of "non-traditional," the NIE scope of interest can be taken to coincide with common useage which defines non-traditional students broadly as adult part-time learners. There is, of course, plenty of confusion over what constitutes "part-time" and who is an "adult." For those who collect, compare, and disseminate statistics on adult education, there is obviously a need for precision in definition (Okes, 1976), but for our purposes the major concern is with learning opportunities and adequacy for people from 17 to 80 or older who combine adult responsibilities of job, home, and family with educational activities.

In 1975, there were at least 17 million participants in adult education[1] who were 17 or older and not full-time students in high school or college. Of these participants, approximately 37 percent were enrolled for two- or four-year degree credit (NCES, 1975). What proportion of these students were enrolled in "non-traditional" programs is anyone's guess, and depends on the definition of non-traditional programs. By one fairly standard definition, a non-traditional program is, among other things, any program that is uncoventional with respect to the type of students enrolled (Ruyle & Geiselman, 1974). Under this definition, the typical evening college, enrolling largely adult part-time learners, is non-traditional even if it offers courses from the traditional curriculum, taught in standard classroom format by regular college faculty members on the college campus. Programs flying under the non-traditional banner today range all the way from this example of a unidimensional program—non-traditional only with respect to scheduling—to multidimensional non-traditional programs that are unconventional with respect to location, schedule, students, faculty, methods of instruction, and curricular content.

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[1] This figure is generally regarded as conservative even by those within NCES who compile official adult education enrollments because people tend to forget or fail to mention educational activities that would qualify. Other estimates range from 32 million (CNS, 1974) to 60 million (Moses, 1969) adults engaged in some form of organized learning activity.

There is a substantial difference between non-traditional students and non-traditional students served by non-traditional degree programs. Even under the most generous definitions, non-traditional *degree* programs probably serve less than 10 percent of the adult learners in the country who are not full-time students. It would, however, be shortsighted to limit our discussion of *access* issues to those presently served or even to those presently expressing an interest in degree credit. Between 80 (Commission on Non-Traditional Study, 1974) and 90 (NCES, 1975) percent of the students currently participating in organized adult learning activities on a part-time basis are high school graduates. As such they are eligible for postsecondary degree-credit. Although a minority of these learners express interest in degree-credit, there is evidence that more people want credit than receive it (CNS, 1974). Apparently there are unfulfilled degree aspirations now among non-traditional learners, and as degree-credit becomes increasingly available to part-time learners, interest in degrees is likely to increase.

A second reason for not limiting our description of student needs and characteristics to degree-oriented non-traditional learners is that almost all state and national needs assessment studies of non-traditional learners use a broad definition in an effort to determine the educational needs of the state, as opposed perhaps to the educational market for colleges. Thus, not only do we lack data on degree-oriented students, but policymakers everywhere are mindful that the lifelong learning envisioned for the future will involve combinations of many learning options from a variety of sponsors. For these reasons, student needs will be addressed using the standard broad definition of non-traditional learner—adult part-time learners.

There are really two dimensions to the question, How well do non-traditional programs serve non-traditional students? One might be phrased, how well do non-traditional programs serve the needs of students *enrolled in them*. This is a question that has not been satisfactorily answered for traditional education yet, but it is one about which educators and legislators are increasingly concerned.

There is another evaluation question, however, that has had much more attention in recent years, especially on the part of policy- and decisionmakers. It is the *access* question of which populations of potential learners are served at all by non-traditional programs. The issue here is not so much the adequacy of the program as the accessibility of it to previously unserved segments of the society.

The broad question of how well non-traditional programs serve the needs of non-traditional students has two aspects then—quality and consumer satisfaction issues (program adequacy) and equal opportunity issues (accessibility). Accessibility, of course, is the prior question if one is interested in assessing the impact of non-traditional education on previously unserved segments of the population. By definition, non-traditional programs have opened new doors of educational opportunity to adult part-time learners. There is not much evidence, however, that non-traditional education has succeeded any more than traditional education in serving disadvantaged segments of society. As Medsker *et al.* (1975) concluded, the students served by the 16 external degree programs they studied appeared "simply to be older versions of the 18 to 24 college-age group" (p. 55). so far as socio-economic indicators were concerned. Virtually all studies of the characteristics of the participants across the range of adult education programs agree that the people served are predominantly privileged members of society. They are disproportionately young, white, well-educated, white-collar workers from the middle and upper classes.

This fact complicates any very satisfactory evaluation of how well non-traditional programs are serving previously excluded segments of society. Since some, if not most, previously excluded groups are still not participating in educational programs—especially not degree programs—the question must be tackled in two phases: 1) Which population groups have gained access to educational opportunity via non-traditional routes? and 2) How well are non-traditional programs serving needs of students once enrolled?

This paper presents data addressed primarily to the first question, but it attempts to lay a conceptual groundwork for future studies concerned about the second question. To gain a satisfactory grasp on either question, some agreement must be reached about which groups of potential learners are of special interest to educators, decisionmakers, and the broader society. At the present time, governmental agencies and many other study groups collect data on demographic[2] or Census Bureau variables such as

[2] Although some purists object to the use of the term "demographic" to refer to descriptive data such as age, sex, race, educational attainment, occupation, etc., it is increasingly used to distinguish between biographical and attitudinal data. We adopt this convention throughout this paper.

race, age, sex, occupation, education, income, place of residence, etc. These variables appeal to statisticians because they are presumably objective ways to define certain populations of people. And they are of interest to society right now because. unfortunately, the variables of race, sex, and age are identified with widespread discriminatory practices in society. Since educational opportunity is seen as the single most important corrective device to bring about social and economic justice, it is not surprising that access to education is almost always measured along social justice dimensions. One important indicator of the nation's progress in civil rights is increased access of women and ethnic minorities, and more recently the elderly, to the full range of educational opportunities.

But it is increasingly true now that the barriers to *educational* participation are not skin color or sex or age *per se*, but the social correlates of those characteristics which are the result of discrimination, e.g., low income, low levels of educational attainment, lack of information about educational opportunity, lack of motivation and academic self-confidence, etc. While it may be quite legitimate to measure social progress by using race, sex, and age to determine *accessibility* to educational, social, and employment opportunities, it may not be desirable to use these variables to evaluate the *adequacy* of educational programs. Unless we can show that blacks, for example, have a common and distinctive profile of educational needs, it will be impossible to say whether educational programs are meeting their needs once enrolled. We are going to contend in this paper that population descriptors such as race, sex, and age *are* useful in determining the accessibility of non-traditional education to previously unserved segments of society. But we are going to question the commonly held assumption that such descriptors are useful in evaluating the adequacy of educational programs or in planning for improved programs and services.

We are not the first to question the practical utility of demographic descriptors for educational planning and evaluation. Morstain and Smart (1977) found that demographic variables were not uniquely descriptive of motivational orientation, and cautioned that "if one is interested in assessing the motivational orientations of adult learners, it may be somewhat confounding to group individuals on the basis of demographic variables." And a moment's reflection shows why this is true. While blacks as a group differ from whites as a group on variables such as income, level of educational attainment, etc., their educational needs run the full gamut from basic literacy education to advanced professional education. Although virtually every study of non-traditional students collects data on race, sex, and age, and in some cases presents extensive cross-tabulations, it is difficult to identify a "black profile" or a "women's profile" of educational needs and interests. One would expect a more homogeneous profile to emerge from using educationally based variables such as interest in a particular subject or need for a non-traditional schedule. Yet these educational preference variables are rarely cross-tabulated with other variables to derive profiles of students with particular needs or interests. Although the data are scanty, we shall look at the potential for more fruitful analyses from the data collected in needs assessments studies.

In summary, the purposes of this paper are four-fold:

1. Using data collected in national and state studies of learners and potential learners, we will attempt to make some assessment of the *access* issues of non-traditional education. We will concentrate our analysis around the frequently studied socially significant variables of age, sex, race, educational attainment, and geographical regions.

2. Using state and national reports, we will attempt to present a synthesis of the findings about the needs and interests of adult part-time learners. This will be a state-of-the-art report on our understanding of the general needs of the populations to be served.

3. Using the generalized findings of state needs assessments, we will construct a student needs profile in order to provide a conceptual framework of variables useful in addressing the question, How adequately are the needs of non-traditional learners being met?

4. Using descriptions of non-traditional degree programs that have been developed to meet the needs of adult part-time learners, we will develop a set of program components. This taxonomy should provide a useful tool in describing and evaluating non-traditional programs.

2. Accessibility of Education for Nontraditional Students

The 1975 Triennial Survey of Adult Education conducted by The National Center for Education Statistics (NCES) provides the most complete and most recent source of data we have with respect to national access issues. One of the major groups for NCES tabulation purposes corresponds very well to our definition of the non-traditional student which is "persons beyond compulsory school age, 17 or older, who were not enrolled full-time in high school or college but were engaged in one or more activities of organized instruction." While "activities of organized instruction" is a definition of adult education that goes far beyond college degree-oriented programs, it represents the range of educational alternatives and will be helpful in looking broadly at the educational interests of various populations of learners, whether presently degree-oriented or not.

One way to present information about who is served by adult education (AE) is to simply take the largest frequencies in each category of the 1975 NCES data and construct a modal profile of participants. This method of looking at the data will give some notion of the high volume areas of adult education.

In 1975, the *largest numbers* of learners fell in the following categories: They were white high school graduates, between 25 and 34 years of age, employed more than 35 hours per week, with annual family incomes of $15,000 to $25,000. Female participants were slightly more numerous than male participants. They were taking job-related courses to improve or advance their status in their current jobs. The courses they took were sponsored by two- or four-year colleges and taught in standard classroom format, meeting in school buildings and on college campuses. Learners paid for their courses from their own or family funds, and while most found that the courses met or exceeded their expectations, the single most common reason for dropping a course was because it was disappointing or too demanding.

There is nothing at all surprising about that profile of participants in AE. It shows that the great bulk of participants come from the great bulk of the American public.

There is another way of looking at the national statistics, however, which shows quite clearly that certain groups within the society reap more than their fair share of adult education benefits. The profile of those who are disproportionately represented in educational activities in comparison with their representation in the population looks a little less like the average American and a little more like the privileged classes. Those taking the greatest advantage of AE offerings are relatively young, white, well-educated, employed in professional and technical occupations, and making good incomes.

Table 1 shows the AE participation rate of various categories of adults over the age of 17 who were not full-time students in 1975. According to NCES data, 11.6 percent of the adults in the United States were engaged in some form of organized instruction during the year. Groups with a below-average (below 11.6 percent) rate of participation are underlined.

The message is quite clear that adult education is serving the privileged classes out of proportion to their numbers in the population. The underlined

Table 1

Participation Rate in Adult Education in 1975,
with Groups Having "Below-Average" (11.6 percent) Participation Rates Underlined

	Participation rate
Age	
17-24	11.5
25-34	20.6
35-44	15.0
45-54	10.5
55-64	5.8
65 and older	2.3
Race	
Black	6.9
White	12.1
Other[1]	13.4
Sex	
Male	11.7
Female	11.6
Educational attainment	
Elementary (0-8 years)	2.0
High school (1-3 years)	4.6
High school (4 years)	11.9
College (1-3 years)	17.6
College (4 years)	27.0
College (5 or more years)	30.4
Income (dollars per year)	
Under 3000	4.4
3000-4999	5.5
5000-5999	7.5
6000-7499	9.1
7500-9999	11.5
10,000-14,999	12.9
15,000-24,999	15.8
25,000 and over	17.7
Hours worked May 11-17, 1975	
Less than 10	7.2
10-14 hours	8.6
15-34 hours	11.6
35 or more	15.3
Region	
Northeast	10.0
North Central	11.2
South	10.4
West	16.6
Metropolitan status	
In SMSA[2]	12.7
Central city	11.0
Outside central city	14.0
Not SMSA	9.4
Non-farm	9.8
Farm	6.7

[1] The Census Bureau classifies Hispanics not as "other," but as black or white.
[2] Standard Metropolitan Statistical Area (SMSA) is a complex category of population density used in Census Bureau analyses.

Source: Complied from 1975 NCES data.

categories in Table 1 reveal that blacks, the elderly, those with part-time jobs, low incomes, and low educational attainment are not well served by adult education, so far as access is concerned. Table 1 also shows some interesting regional and population density variations in the accessibility of education which will be discussed more fully later.

A closer examination of the profile of some of the underrepresented groups follows:

ETHNIC MINORITIES

Despite the concern in recent years about educational opportunity for ethnic minorities, the data on participation and preferences of minority groups is not very complete. The most comprehensive data about race as a variable in adult education appears in the Triennial Surveys of NCES for 1969, 1972, and 1975. But even in these data, publication of categories is limited to black, white, and other.[3]

The common practice in most state studies is to collect data about many ethnic groups but to analyze not more than three categories. The Colorado study (1975), for example, uses white, Spanish American, and other; the California study (1975) analyzes data for white, Spanish surname, and blacks; the national Commission study (CNS, 1974) presents data for blacks and whites.[4]

Since the best, albeit limited, data base on ethnic minorities appears in the NCES data, we shall use it as the foundation for this analysis, presenting data from other studies when appropriate to confirm, dispute, or elaborate. Since educational needs are known to differ greatly among ethnic groups such as Orientals and American Indians, it would appear that analysis based on collections of miscellaneous "others" would be fruitless, hence discussion will be limited to differences between blacks and whites, and where material is available from state studies, to Spanish Americans.

In 1975, 12.1 percent of the whites participated in some form of AE compared to 6.9 percent of blacks. For some not immediately apparent reason, the educational opportunities represented in AE are getting worse for blacks rather than better. In the years 1969, 1972, 1975, the participation rates of blacks were 7.8 percent, 7.4 percent, and 6.9 percent respectively. Whites in contrast, showed *increasing* rates of participation, from 10.2 to 11.7 to 12.1 percent.

For those who are committed to social justice and equal educational opportunity, the participation rates of blacks in continuing education is a matter of grave concern. Perhaps a closer look at the data will shed some light on the problem.

The profile of black participants in AE, as compared with whites, would look something like this.[5] Blacks have lower levels of educational attainment (53 percent of whites and 39 percent of blacks have had at least some college), earn lower incomes (24 percent of whites and 44 percent of blacks have annual incomes under $10,000), are more likely to be unemployed (4 percent for whites, 10 percent for blacks), are much more likely to live in the central city (25 percent for whites versus 60 percent for blacks), and live in the south (27 percent for whites, 48 percent for blacks).

These statistics demonstrate that black adult learners are disadvantaged relative to white learners. It should be remembered, however, that both black and white learners are advantaged relative to their counterparts in the general population who are not engaged in learning activities. For example, while 44 percent of the black learning participants have incomes under $10,000, 67 percent of the black nonparticipants do. And while 21 percent of the black participants had not graduated from high school, 58 percent of the black nonparticipants were not high school graduates.

It is, of course, well established by this time that socio-economic indicators are strongly related to participation in educational activities. Low educational attainment, low job status, and low income have a great deal more relationship to educational disadvantagement than race *per se*. If blacks and whites are equated for educational attainment, for example, differential participation rates are negligible. In 1972, both blacks and whites with less than a high

[3] "Other" includes American Indian, Oriental, etc., but not Puerto Rican, Mexican American, and other Spanish-speaking groups which are classified as either black or white.

[4] State and national studies are referenced by state or agency in the text and in Appendix C and by author in the references.

[5] Data for this particular description are from the 1975 preliminary tables of the NCES Triennial Survey. They include persons 17 and over who are not full-time students in high school or college but who were engaged in one or more activities of organized instruction, i.e., adult education (AE).

school diploma had a 4 percent AE participation rate and both blacks and whites with a college degree or more had participation rates of 29 percent (NCES, 1972, p. 9). Nevertheless, the question of access to educational opportunity for ethnic minorities *per se* has been a concern of the national and of federal agencies, and NCES data permit us to construct a more complete profile of blacks than of other minority groups. Since the profile for black male learners differs somewhat from that for black females, the profiles for black men and women will be presented separately. These profiles, it should be remembered, describe the interests and reactions of adults who *have* gained access to educational resources, albeit not necessarily non-traditional degree programs. As such, they indicate how educational resources *are* serving blacks, not necessarily how they should be.

A Profile of Black Male Participants in AE in 1975

Black men appear to be using educational opportunity largely for upward job mobility. They, more than whites, select courses that will lead to credit or to skills that will help them to get a new job. They are considerably more likely than white males to be enrolled in courses offered by two-year colleges or vocational schools (43 percent to 26 percent) and in courses leading to licensure or college credit (45 percent to 28 percent). Over half (63 percent) of the black male learners attend their classes in school and college buildings, and 70 percent are doing their learning in traditional class formats presided over by classroom teachers.

A distinctive problem for black males is completion of courses. Whereas 74 percent of whites and 62 percent of black women report completing their courses, only 48 percent of the black men do. It is not so much a matter of dropping courses as of reporting courses still in progress (46 percent for black men, 29 percent for black women, and 25 percent for white men and women). When black men do drop courses (about 9 percent do), their problems, more than those of whites, seem to be related to job and family situations. Financial problems, care of family members, and job changes are more likely to plague blacks than whites, but black males seem to offer relatively more individualistic reasons for dropping courses; almost one-fourth of them gave reasons that were classified as "other" compared to 16 percent for white males and females, and 18 percent for black females.

A Profile of Black Female Participants in AE in 1975

Black females, more than black males or whites, seem to be pursuing rather traditional courses in the regular school system. They are much more likely than the other groups categorized by NCES to be taking "general education" courses (44 percent compared to 28 percent for black males to 22 percent and 17 percent for white females and males respectively), and likely to be overrepresented in adult basic education, highschool, college, and postgraduate courses for credit. It appears that black women are making good use of financial aid programs since over a third (35 percent) are paying for their courses with public funding (versus 28 percent of black males, 18 percent of white males, and 14 percent of white females).

Their reasons for continuing their education are basically job-related and they are much less likely than white women to be taking so-called "luxury" courses in social life and recreation (3 percent to 24 percent), or courses in community issues (5 percent to 11 percent), or personal and family living (9 percent to 29 percent).

The dropout rates for black females are a little higher than for the average adult learner (11 percent to 7 percent) but dissatisfaction with educational programs seems not to be a major cause. They are less likely than whites to drop courses because they are disappointing or too demanding (13 percent to about 26 percent for white males and females), and 62 percent rate their courses more helpful than expected. The causes of dropouts for black women seem to be related to situational factors such as change in job or residence or care of family and children.

Other Data and Summary

Although almost anyone conducting "needs assessments" of adult learners collects information about race, very few make much use of it except to support the general conclusion that ethnic minorities are educationally disadvantaged with respect to access to a variety of educational opportunities.

Data from the national survey of the Commission on Non-Traditional Study (CNS, 1974) supports the general observations made from the NCES data, reinforcing the findings that non-traditional sponsors and forms of education are used more often by whites than by blacks. Whereas blacks tend to use publicly financed programs of continuing education, white males tend to be overrepresented in learning sponsored by employers, unions, and professional

associations, and white women predominate in the educational programs of community and private organizations. Similarly, the CNS data show that blacks are somewhat more likely to favor traditionally oriented class groups for instruction, whereas whites use a wider range of instructional methods including independent study and private lessons. The California survey (1975) found Mexican-Americans significantly less likely to be interested in independent study or televised instruction than either blacks or whites.

AGE

Participation and interest in organized educational activities are clear functions of age. Interest, as well as participation, starts to decline in the early 30s and drops sharply after age 55. Summarizing data across a variety of state and national studies, it is safe to conclude that no more than 10 percent of adults over the age of 55 are currently participating in AE activities (California, 1975; CNS, 1974; Iowa, 1976; NCES, 1972). In two recent national studies, the decline of interest is gradual until age 55 when it drops off sharply (CNS, 1974; NCES, 1975).

Some of the declining interest in education with age can probably be attributed to the educational attainment factor that is so pervasive in influencing participation in continued education. It is quite clear from all of the research, that the more education people have, the more they want;[6] and because educational opportunity has been increasing rapidly, younger people are more highly educated than older generations. For example, in 1940 when most of today's 55 year-olds would have been graduating from high school, only half of the age group were actually completing high school whereas today three-fourths of the population complete high school. But other factors that probably have some bearing on the declining participation of older people in educational activities are lack of motivation for career advancement, (which so dominates the motivations of young people) and declining energy and mobility.

The tabulation below, taken from California data (1975) shows, in the columns from left to right, the decreasing interest in education as a function of age, increasing convictions that advancing age is a barrier to learning, and increasing proportions of people who say that they are not interested in any counseling or instructional services to help them participate in educational activities.

Age	Interest	Too old	No services desired
18-29	83 %	2%	20%
30-39	69	2	28
40-49	60	7	40
50-59	48	11	44
60 and over	20	14	73

National data (CNS and NCES) show those 55 and older to be less interested than younger people in vocational and career subjects and more interested in hobbies and the use of leisure time. California data (1975) showed, for example, that one out of three potential learners 60 or older were interested in learning arts and crafts. The humanities are also a strong interest of older people, not for credit, but for personal satisfaction and cultural enrichment.

Virtually all studies show the steady decline of interest in credit or certification with advancing age. Data from the Central New York study (Russell, undated) are illustrative:

Age	Formal recognition desired
18-25	67%
26-35	55
36-50	38
51 and over	24

Older people express the need for and interest in non-traditional methods of delivery. In both CNS and NCES data, classes and lectures rate lower in utilization and interest for older than for younger people. Lack of mobility of older learners presents a conflict. While almost half of those over 60 in the California study said that a primary motivation for their participation in AE was to meet new people, they are overrepresented in most forms of "lonely" learning. They are overrepresented among those studying independently via TV, radio, or private lessons (NCES, 1972). Correspondence study, however, is not popular among older citizens.

The use of and interest in private tutors by older learners shows up in most of the studies and identifies a conflict between declining purchasing power and

[6] See discussion on pp 14-16 regarding educational attainment.

desire for companionship on the part of senior citizens lacking mobility. While those 55 and older make up 8.7 percent of the participants in AE, they constitute 12.1 percent of those learning from private lessons (NCES, 1972). California data (1975) showed that one out of five senior citizens over 60 say that private lessons would be a good way for them to learn; that was the largest proportion of any age group interested in the use of tutors. At the same time, persons over 60 are more likely than any other age group to say that they cannot afford to pay anything toward the cost of educational activities (California, 1975).

Because age, especially 55 and older, is clearly a barrier to educational participation, we have presented this profile for older learners. The NCES tables for 1972, however, provide an opportunity to discuss the relationship between age and learning preferences across the spectrum of AE. The following observations are selected items of interest:

- Younger people (17-34) and older people (55 and older) are disproportionately represented in general education courses,[7] with younger people taking standard academic subjects and the older group overrepresented in adult basic education courses.
- Younger learners (17-34) are underrepresented in courses on community issues, whereas after age 35 interest increases with age group.
- Learners in the 25-34 age bracket and those over 55 are overrepresented in social and recreational learning.
- Those 17-24 are especially likely to take courses that will help them get a new job, whereas those 25-34 are seeking advancement in a current job, or are showing interest in social and recreational activities. Older persons (45 and over) are overrepresented among those pursuing community and family interests and social and recreational learning.
- With respect to methods, 17-24 year-old learners are overrepresented in organized training on the job, 25-34 year olds in correspondence study, 35-44 year olds in workshops and discussion groups, 45-54 year olds in lecture series and TV and radio, and those over 55 in TV and radio learning. But for all age groups lectures and workshops are generally the most popular methods for learning.
- Young learners (17-24) are overrepresented among those receiving public funding, 35-54 year olds are disproportionately represented in employer-funded programs, and learners 35 and over are overrepresented among those benefitting from funding supplied by private organizations.
- Young learners are substantially overrepresented in two-year colleges and private trade schools, 25-34 year olds are overrepresented in four-year college and university offerings, 35-44 year olds in education sponsored by labor organizations and professional associations, and those 55 and over in the educational offerings of community organizations and private tutors.

Conclusions and Implications

It is quite clear from the data that age is an educationally relevant variable, following quite logically along the developmental stages of adults. Younger people tend to be pursuing general education, gaining the credentials and laying the [general] groundwork for later career specialization. Those in the age ranges of 25 to 44 are concentrating largely on career advancement, whereas those 45 and over are beginning to prepare for the use of leisure time. The data strongly support the policy analysis of Best and Stern (1976). In a presentation to the Monthly Dialogue on Lifelong Learning, they documented the existence of the "linear life plan" in which work is increasingly compressed into the middle years of life, while nonwork time increases—sometimes undesirably—for young people (in the form of full-time education) and for older people (in the form of retirement). They see grave problems ahead if this trend is allowed to continue, and they suggest that "our society should begin to consider the new alternative of more cyclic life patterns" (p. 54). This approach would encourage mid-career people to leave their jobs temporarily to engage in leisure, education, or community service activities, and it would have the effect of redistributing education, work, and leisure more equitably across an individual's life span and across society's age groups. Were our society to move toward more cyclic life patterns, it would change people's perceptions about when and what to study,

[7] By "disproportionately represented" we mean, for example, that whereas 17-24 year olds constitute 22 percent of the AE participants, they make up 33 percent of those enrolled in general education courses. That does not necessarily mean that general education courses are the most popular form of education for 17-24 year olds. Most NCES data presentations give the former but not the latter tabulation.

and it would change the age profile of learners presented here. For the most part, these data depict what does exist in the behavior and attitudes of people, not what would be ideal. There is some slight evidence, however, that attitudes are changing. NCES data show that the proportion of persons 55 or older participating in AE moved from 2.9 to 3.5 to 4.0 percent for 1969, 1972, and 1975 respectively. In fact, certain educational opportunities for persons over 55 may be rising at least as fast as the interest of older adults in educational pursuits. A very recent ACE survey of educational programs for adults 55 and older (Atelsek & Gomberg, 1977) showed that over half of the public two-year colleges and universities surveyed offer instructional programs specifically designed for older adults—courses geared toward a second career, preretirement courses, self-improvement or leisure time courses, and short-term residential courses. Public four-year colleges and private institutions of all types were less likely to offer special programs and services for older adults.

Community service programs for older adults (special tuition plans, library privileges, recreational programs, etc.) were also common in public institutions, with 70 percent of the public community colleges and 61 percent of the public universities providing some form of service programs. Apparently the services to older adults are successful. Almost half of the institutions reporting special programs and services are planning to increase the scope of their efforts, whereas only 19 percent of those without such programs are planning to institute them.

SEX

Men and women participate in AE activities at about the same rate, 11.7 percent for men and 11.6 percent for women (NCES, 1975); or to put it another way, 49 percent of AE participants are men and 51 percent are women (CNS, 1974). There is some indication, however, that women would like to participate more than they do. The CNS (1974) survey found that whereas 51 percent of the actual learners were women, 54 percent of those who expressed an interest in further education were women. But women do seem to be taking advantage of new opportunities. NCES data indicate that women part-time learners are increasing more rapidly than men. The AE participation rates for men have remained quite steady over the six years of the Triennial Surveys at 11.2 in 1969, 11.9 in 1972, and 11.7 in 1975. For women, participation rates have risen steadily, from 9.0 to 10.8 to 11.6 for 1969, 1972, and 1975 respectively. Table 2 shows the proportion of eligible men and women of three age groups reporting AE activity in the three Triennial Surveys.

Table 2

Participation Rates of Women and Men in Adult Education Activities by Age

Age	1969	1972	1975
Women			
17-34	12.3	15.0	16.0
35-54	10.4	12.0	12.9
55+	3.2	3.9	4.3
Total	9.0	10.8	11.6
Men			
17-34	16.8	16.9	16.0
35-54	11.8	13.1	12.5
55+	2.5	3.0	3.6
Total	11.2	11.9	11.7

Source: NCES data, 1969, 1972, 1975.

Women at all age levels have caught up with men in educational participation. Younger women (17-34) have closed the rather substantial gap that existed in 1969; middle-aged women have come from behind to surpass men in 1975, and older women (55 and older) have retained their lead.

For women, even more than for men, prior education stimulates further participation in AE. The latest NCES figures (1975) indicate that 24 percent of women with some college experience are AE participants compared to 21 percent of college-educated men. Table 3 shows participation rates for men and women by highest level of schooling completed.

Table 3 shows that as the level of educational attainment increases women tend to pull farther and farther ahead of men in the rate of participation in AE activities. The explanation probably lies in the fact that advanced education is still a more unusual accomplishment for women than for men, and that the additional motivation of highly educated women is reflected in the AE statistics.

The profile of the "typical" woman engaged in AE may demonstrate, better than analysis by any other

Table 3

Participation Rates of Men and Women in Adult Education Activities by Highest Level of School Completed

Educational attainment	Men	Women	Total
Elementary (0-8)	2.1	1.9	2.0
High school (1-3)	4.3	4.8	4.6
High school graduate	12.2	11.7	11.9
College (1-3)	16.8	18.3	17.6
College graduate	24.3	30.0	27.0
Postgraduate	27.3	36.1	30.4

Source: NCES, 1975

demographic characteristic, the necessity for designing evaluation studies that are linked to learner needs. While population descriptors are easily obtained and frequently available as statistical data, they are not necessarily educationally relevant, nor can they be made so without constructing a profile of learner needs. It would be difficult to find even a demographically narrowly defined group, e.g., black urban women over 25, that presented a homogeneous educational needs profile. For example, the question, How well does an educational program serve black urban women over 25? is not answerable until we know past educational attainments, goals and aspirations, scheduling demands, preferred methods of study, etc. One might better ask a question such as the following: How well does an educational program serve those with a high school education who would like to get out of a dead-end job into a career, and who have a strong need for social reinforcement in the learning process? Whether these persons are male or female, black or white, urban or rural, may have some bearing on the educational needs profile, but it will be very difficult to design and evaluate educational programs for so-called "target" groups if the targeting is based primarily or solely on demographic characteristics.

If we simply wish to describe the characteristics and interests of the typical woman participant in AE activities, we get the profile of Ms. Average American Woman. The profile of the woman most commonly found in AE looks like the profile of the woman most commonly found in America. In one sense, this is simply to affirm that adult educational activities serve the broad spectrum of American women. Taking the largest *volume* of female learners from NCES 1975 data, the profile looks like this:

The most common adult female part-time learner is white, a high school graduate without college experience, working less than 10 hours per week (but almost as many are working more than 35 hours). She works at a clerical job and is pursuing occupational training in order to advance in her current job. She is also highly likely to be engaged in learning things that are useful to her as a wife and mother. The money for her education comes from family savings, and four-year colleges and universities are the single most common sponsors of her classes, although large numbers also attend classes sponsored by the public schools, two-year colleges, and community organizations. She is taking mostly noncredit courses and evaluates her experience as helpful.

If we rephrase the question now to address the issue of *relative* access to educational opportunity, we then get a profile of women who are participating in AE at a rate exceeding their numbers in the population. That profile would give the well-known privileged-class syndrome—white, well-educated, frequently a teacher taking professional or extension courses from fairly traditional colleges in order to help on the job or in raising a family.

Another way to look at a profile of women learners is to contrast their participation and interests with those of men. In this comparison, the female profile looks like this (NCES, 1975):

She is better educated than her male counterpart, more likely to be taking courses for credit and less likely to be vocationally oriented. White women, but not black, are much more likely than men to be pursuing education for social and recreational reasons or for personal and family use. They are more likely than men to stick to traditional educational systems and traditional classes and lectures, or to education offered by community agencies. They are less likely than men to participate in employer-sponsored training or correspondence courses. Money for their education is likely to come from family savings (68 percent and 46 percent for white females and males respectively, and 44 percent and 38 percent for black females and males). In noncredit courses, women are more likely to take courses that are not job related, whereas men are more often found in noncredit job-related education. Women tend to evaluate their courses higher than men, but they are more likely to drop a course, citing family responsibilities as a causal factor somewhat more frequently than men.

Summary and Conclusions

Women are closing the educational gap between men and women in both part-time and full-time study. Thus we can conclude that so far as access is concerned, non-traditional education has improved its service to women in recent years. There are still some areas of inequity, however, between educational opportunity for men and for women. Employer-sponsored programs, for example, are still relatively closed to women, with men's participation rate of 21 percent double that of women at 10 percent (NCES, 1975). Furthermore, employee organizations such as unions and professional associations do not balance the inequity with respect to the most highly job-related education; men are twice as likely as women to gain access to courses sponsored by labor unions and professional associations.

Another difficulty in educational access for women is related to the whole financial question, which shows women much more likely to be paying for their own education; but the principal disparity occurs in employer-funded programs where men are about twice as likely to obtain funding as women. There are not big disparities between men and women in public financing or in funding from private organizations. Nevertheless, women consistently report more concern over the cost of education. Their distress is in part related to their attitudes about using family savings for their education. But it is also true that at any income level men are more likely than women to collect reimbursement from employers and from military service.

The conclusion from examination of the data is clear: The backgrounds, needs, and aspirations of women are so diverse that there is really no homogeneous needs profile that pertains to women, or even to more restrictively defined demographic groups such as "urban black women over the age of 25." It would appear more useful to develop needs profiles for people with common educational needs and aspirations, taking into consideration the unique needs of certain groups of women, e.g., the need for child care, for reentry orientation, for convenient locations, etc.

EDUCATIONAL ATTAINMENT

Of all the descriptors of learners, educational attainment is probably more closely related to the interests, motivations, and participation of adult learners than any other single characteristic. This observation is consistent across a great variety of studies and is responsible for predictions that adult education will continue to rise as the educational attainment of the populace rises. It is demonstrably true that people with more education want more and get more. Shown below are the 1975 NCES and 1972 CNS statistics for AE participation rates of adult part-time learners over the age of 17 by highest level of prior education.

Although the CNS survey found a higher overall rate of participation than NCES, the patterns are similar and show a clear increase in participation in AE with increasing educational attainment. Similarly

Table 4

Participation Rates in Adult Education Activities by Highest Level of Prior Education

Highest level of prior education	Percent participating in adult education	
	1972 CNS	NCES 1975
Elementary school (0-8 years)	10	2.0
High school (1-3 years)	20	4.6
High school graduate (4 years)	31	11.9
College (1-3 years)	48	17.6
College graduate (4 years)	57	27.0
Advanced study		32.7
Average	31	11.6

Sources: CNS, 1974; NCES, 1975.

the pattern of *interest* expressed by those who are called "would-be" learners by CNS is also one of clear step-wise progression with increased educational attainment. Clearly, those with less than a high school diploma (39 percent of the population 25 or older in 1972) are underrepresented in continuing education activities. Because this project is concerned primarily with postsecondary education, we shall focus our discussion on degree-eligible populations, comparing the relatively low rate of participation of high school graduates to those with college experience.

Approximately 39 percent of adults over 17 in the United States are high school graduates who have not entered college. Whether CNS or NCES figures are used, the AE participation rates of high school graduates are very close to the national average. The 1972 NCES data plus the 1972 CNS data permit us to present a profile of the participant in AE whose highest prior level of education is graduation from high school.

More females (55.5 percent) than males (44.5 percent) participate, and half report family incomes of from $7500 to $15,000 per year. A majority of these learners are clustered in occupations designated as clerical, craftsmen, operatives, and service workers (NCES, 1972).

Learner interests, as a function of past educational attainment, show that educational choices follow predictable patterns. High school graduates without college experience tend to select vocational and technical courses and courses on community issues, whereas those with some college courses already to their credit are overrepresented among those taking general academic courses. The better educated (and higher income) groups are also more likely than less well-educated learners to take the so-called luxury courses in social and recreational education and in personal development.

Consistent with the subjects elected by high school graduates are their choices regarding methods of education. Those with college experience are overrepresented in lectures, workshops, and TV courses, whereas high school graduates without college experience favor on-the-job training and, interestingly, are substantially overrepresented in correspondence courses. Whereas those whose highest level of educational attainment is high school graduation make up 38 percent of adult learners, they constitute 49 percent of those enrolled in correspondence study (NCES, 1972).

There is no surprise in data showing that high school graduates without college experience tend to predominate in courses sponsored by two-year colleges, trade schools, and employers, whereas college-educated learners are overrepresented in courses sponsored by four-year colleges and professional associations. Similarly, it is clear that the recognition accorded is likely to be skill certification for high school graduates and degree credit for those with some college. Most learners—58 percent according to NCES (1972) and 61 percent according to CNS (1974)—received no credit or recognition for AE activities. But the CNS survey indicated that people would like more recognition than they presently receive. While 39 percent of the learners got some form of certification, 68 percent of the would-be learners indicated an interest. However, recognition need not be in the form of degrees or academic credit; in fact, the greatest discrepancy between credit received and credit desired seems to occur over the matter of skill certification, where 7 percent of the learners received recognition and 20 percent of would-be learners expressed an interest in it (CNS, 1974). It seems obvious that if a learner's reason for taking a course is to get a job or be promoted (which it is for most high school graduates) he or she will want something that the employer will recognize—if not the skills then at least a certification of course completion.

But completion of coursework seems to be a direct function of educational attainment. High school graduates without college experience contribute more than their share to the dropout statistics. Whereas the overall dropout rate among adult part-time learners was 10 percent in 1972, those with only high school diplomas showed a dropout rate of 16 percent compared to 6 percent for those with college experience (NCES, 1972). The high school graduate group has a disproportionately high incidence of not reporting the reasons for dropping a course, but when reasons are reported, inconvenient locations and disappointing or demanding courses play a prominent role.

The relatively high dropout rates of high school graduates compared with those with some college experience leads some to hypothesize that less well-educated learners are less motivated learners. The hypothesis of less motivation for those who have not advanced as far (been less successful?) in the traditional school system is supported by the findings of the California study (1975) which found that when people were asked how much time was available for learning, 61 percent of the high school dropouts reported they could devote no more than nine hours

a week to their studies compared to 45 percent of the college graduates. Yet high school dropouts are less likely to be fully employed or engaged in professional and technical occupations which frequently require time beyond the eight-to-five work day. Furthermore, problems with low grades, enjoyment of study, and feeling too old to learn are cited more frequently by those having less education. More highly educated respondents, on the other hand, are more troubled by lack of time and job responsibilities. As Rubenson (1977) points out, studies of recurrent education throughout the world have overemphasized external environmental barriers (finances, opportunity, time, etc.) at the expense of greater study of psychological impediments (self-confidence, level of aspiration, etc.).

Conclusions and Implications

As one becomes immersed in the data characterizing the various populations of learners and potential learners, it becomes quite clear that in the data of "prior educational attainment" lies much of the information that would be helpful in understanding the needs and motivations of adult learners. Educational attainment is a clear index to participation in AE. Not surprisingly, an adult's past experiences with education have a lot to do with whether he or she wants more. Those who have been successful and happy in traditional education and have pursued it to high levels seek more of the same. Furthermore, those who have done well in lectures and class discussions tend to seek a continuation of those experiences, whereas those who have not done well in those formats prefer something else, such as on-the-job training or correspondence study. It is also apparent that those who went farthest in the system are likely to be the most successful and self-confident learners. As such, they are demonstrably more open to a greater variety of methods and courses than less well-educated adults who express continuing self-doubts about their ability to learn.

One can argue that the greater and broader interests of highly educated adults are due to the class status that affords them the luxury of education for recreation and personal development. In light of the overall picture presented in the data, an equally persuasive argument can be made that less well-educated adults have not had the kind of educational experiences in the traditional system that would make them want to seek education beyond what is necessary to get ahead on the job or handle the practical matters of living.

In short, while the interest profiles of adults with limited formal education suggest practical and concrete courses with clear and immediate rewards, we should also note that the "need" of most people is to experience satisfaction and success in learning. Most easily for the educational establishment, this means that alternatives are necessary in order to accommodate the needs of diverse populations of learners. But less easily, it raises the troublesome question of evaluation of non-traditional education. How does one evaluate a course with "High" standards that makes some learners clearly successful and others clearly unsuccessful? How the learners feel about themselves and their capacities for future learning is surely an important consideration in the evaluation of any voluntary system of education. Noncredit adult education is not obligated to weed out the less successful (by external standards) learners. That may be one reason for its spectacular growth.

One recommendation for further studies arises out of this analysis of the role of prior educational attainment. Past education is a descriptor that is easy to obtain and is, in fact, routinely collected in almost all studies of learner characteristics. It is, however, not often given the comprehensive analysis it deserves in the study reports. Many present studies could profitably reanalyze their data and take a more careful look at the role of past educational attainment in the educational needs and interests of non-traditional learners. In addition, however, we need new data and more in-depth studies to provide a better understanding of the impact of past educational experiences on attitudes and interests.

GEOGRAPHIC BARRIERS TO ACCESS

National and statewide studies of participation and interest in adult learning show considerable variation by geographical region (see Table 1). For example, educational opportunity is widely conceded to be greater in the western states than anywhere else in the country. In the 1975 NCES data, the rate of participation in adult education in the western states[8] was significantly above the national average—16.6

[8] The states included in the Census Bureau's category of the western region were: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, New Mexico, Oregon, Utah, Washington, and Wyoming.

percent compared with 11.6 percent nationally. Furthermore, the West was the only one of the four Census Bureau regions to show above-average participation rates in *all* categories of population density—cities, suburbs, towns, and rural areas. In Willingham's (1970) study of access to postsecondary education, he wrote:

> The West is far ahead of other regions with respect to the number of free-access institutions and the proportion of all entering students enrolled in them. But this is well known and need not be lingered over. (p. 25)

But for our purposes it may be interesting to linger over regional differences to see if we can ferret out some of the causes.

Data collected for the National Commission on Non-Traditional Study (CNS, 1974) show that westerners not only participate in learning activities more than residents of other regions, but nonparticipants also evidence somewhat greater interest in learning than their counterparts in other regions of the country. The difference is especially well illustrated in the state studies of California (1975) and Iowa (1976) because these two studies used essentially the same interview questions.

In California, 59 percent of adults interviewed said they were interested in participating in further learning beyond high school within the next two years. In Iowa, only 36 percent indicated similar interests. The difference showed up again when prospective learners were asked which of 12 noninstructional services (counseling, assessment, credit-registry, etc.) would interest them. Fifty percent of Iowans compared with 15 percent of Californians said they were not interested in any of them. Similarly, 31 percent of Iowans but only 5 percent of Californians said they were "no longer interested in formal schooling." One can conclude from these figures that California presents a more positive climate for learning than Iowa does.

A number of hypotheses could be advanced for the differences in expressed interest and participation in further education on the part of Iowans versus Californians. Educational accessibility has an obvious and demonstrated impact on participation rates (Bashaw, 1965; Bishop & Van Dyk, 1977; Koos, 1944; Trent & Medsker, 1965). Willingham (1970) showed that 60 percent of Californians but only 39 percent of Iowans live within a 45-minute commute of a free-access college.[9] Since the Iowa analysis of educational resources found that 82 percent of the programs for nontraditional learners used traditional classroom lectures as their principle mode of learning, commuting distance is a matter of considerable significance. It should be interesting to observe the impact of the new media delivery systems of the University of Mid-America on the rates of educational participation in Iowa.

Differences between Iowa and California residents lay, however, not only in *participation* rates but also in expressed *interest*. Why should Californians be so much more interested than Iowans in further education? One possible explanation lies in the consistent research finding that the more education people have the more they want. If the level of educational attainment is significantly higher in California, that fact may constitute an explanation. National figures for median educational attainment of adults 25 years and older show 12.2 for Iowans and 12.4 for Californians—not a great difference (Grant & Lind, 1976). However, the difference may lie in expectations regarding *postsecondary* education. Although the high school graduation rate is as high for Iowans as for Californians, college attendance in California is higher. Of the adult population in California 30 percent have had some college, while only 20 percent have in Iowa (Grant & Lind, 1976). Many Californians get some college work through part-time study. Hamilton (1976) reported huge differences in part-time college study—53 percent for California compared with 17 percent for Iowa. This difference no doubt reflects the profusion of free-access community colleges in California.

In the absence of social intervention, we could expect regional disparities to increase as those with greater access to education become better educated and show greater interest and make greater demands for educational opportunities and services. Regional differences in access vary widely. Willingham (1970) reported that the percentage of new freshmen enrolled in free-access colleges was 71 percent for the West, 50 percent for the South, 34 percent for the Midwest, and 22 percent for the Northeast. While

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[9] Willingham's criteria for a free-access college are that it charge no more than $400 annual tuition, at least one-third of the freshman class be composed of students who graduated in the lower half of their high school class, and that the college be within 45 minutes commuting time from the students' homes.

Willingham was looking at traditional institutions, the NCES data on adult learning tells much the same story. Participation is greatest in the West (16.6) and lowest in the Northeast (10.0) and the best guess is that, in the absence of public policy, these differences will increase.

Much the same kind of analysis can be made with respect to variations based on population density. Table 1 shows participation rates in adult education activities in 1975 by metropolitan status. Clearly, people living in suburban areas are more likely to participate in educational activities than those living in areas of sparse population or in the dense populations of central cities. Farm areas are clearly disadvantaged, with a participation rate of only 6.7 percent compared with 11.6 percent nationally.

Once again, Willingham's analysis of access to colleges would seem related to these findings regarding participation in adult education. He found that 63 percent of the people residing in small cities (population 50,000 to 250,000) lived within a 45-minute commute of a free-access college, whereas only 24 percent of rural residents are so conveniently located. Central city residents fall in between with 38 percent of the population facing a 45-minute or less commute to a free-access college.

A few words about the lack of college access in some of the most densely populated areas may be in order. One can hope that improvements have been made since 1970 when Willingham's analysis was completed, but at that time he noted that "suburban colleges are almost twice as likely to be free-access despite the pressing social problems in the central cities" (p. 27). Furthermore, he found six metropolitan areas with populations larger than one million that had no free-access institution at all in the central city.

Policy implications in these analyses seem fairly clear. The opportunities for participation in continuing education are relatively limited in sparsely-populated areas and in the central cities. While the central city problems of access might be alleviated fairly easily by creating additional off-campus learning centers, access in rural areas may await the development of more sophisticated delivery systems combined with adequate information and counseling services. Although there are admittedly other factors (such as lower educational attainment, lower SES, etc.) that contribute to low rates of participation and interest of rural and inner-city populations, access is a fundamental requirement that would appear to precede interest and favorable attitudes toward continued learning.

CONCLUSIONS AND NEXT STEPS

A Comprehensive overview of the role of demographic variables in adult education has been presented. Although the Triennial Surveys of NCES (1969, 1972, 1975) are generally conceded to be conservative with respect to the number of adults participating in organized learning activities, the *patterns* revealed in NCES data are confirmed by other studies. Indeed, there are few surprises and few inconsistencies in the demographic data presented by state, national, and even international studies.

We can be quite confident in stating that the following populations are underrepresented among the participants in adult education: ethnic minorities, senior citizens, those with less than a high school diploma, those with incomes under $10,000, those living in areas of dense population (central cities) or sparse population (rural areas), and those living in the Northeast or South.

The causes for the low participation rates of these groups are multiple, but the most influential of the descriptive demographic variables seems to be educational attainment–which is itself a complex variable reflecting motivation, opportunity, interest, income, ability, etc. Clearly, the more education people have the more they want and the more they get. In the absence of any social policy to the contrary, the education gap between the haves and the have nots will increase in any system of voluntary education simply because the haves will continue their forward momentum.

Most of the practical knowledge gained through an analysis of which populations are disadvantaged with respect to adult education opportunities comes from logical inferences about motivations underlying the situations in which various population groups find themselves. Women, for example, constitute a growing segment of AE because formal education is now useful in the job market; blacks are interested in degrees or other forms of formal recognition because credentials are essential for upward mobility; senior citizens are not much interested in degrees because at their stage of life a degree brings no rewards except possibly personal satisfaction, and so it goes. Taken collectively, explanatory inferences add something to our understanding of the dynamics of educational opportunity as a function of social environments.

It is our conclusion, however, that except for monitoring the nation's progress with respect to

social justice–one important index of which is educational participation–little progress will be made by further collection and analysis of the kind of demographic descriptors summarized here. What is needed is a much more complex analysis of educationally-relevant variables and the creation of some theoretical models that will help to *explain* (as opposed to simply describe) educational participation. Speaking of the progress of countries throughout the world in this respect, Rubenson (1977) rightly observes that

> Studies have been mainly concerned with describing who takes part in adult education, particularly with regard to different statistical background factors such as age, education and social status. . . . Research so far has neither yielded new points of inquiry, confirmed uncertain findings nor developed new methods. In fact the investigations which have dealt with participation in adult education have been of strikingly little interdisciplinary importance. (p. 3)

The next section of this paper will move us one small step closer to understanding the needs of non-traditional learners. Our objective in Section III is to summarize across a rather rich array of recent state, regional, and national "needs assessments" in order to: 1) develop a taxonomy of learner needs, and 2) synthesize what is known from these studies about the needs of adult part-time learners. Most of the data come from asking learners and potential or would-be learners about their needs and interests. As with the demographic analyses, the findings are generally in broad agreement, and we certainly know by now a great deal about what adults *say* they want in terms of educational opportunities.

3. A Profile of Learner Needs

The most common method for arriving at a catalogue of the needs of learners has been to ask adults who are participating in adult learning activities and those who say they would like to participate (would-be learners) what they want and need. Within the last couple of years, "needs assessments" have become a virtual fad for state planning agencies. Large numbers of adults throughout the country have been polled regarding their interests in further education, and we now have a great deal of data about certain dimensions of learner needs. Major studies completed within the last five years are described in Appendices A and B. The variables investigated are strikingly similar from study to study. This permits us to develop a catalogue of the needs and interests of adult learners, at least insofar as they have been identified by the designers of needs assessments.

Chart A has been constructed from two sources. The left-hand column, labeled *Learner Needs*, contains the common variables used in state assessments to study the needs of adult part-time learners. The right-hand column, labeled *Program Responses*, consists of the components or special features of non-traditional programs that have been developed in response to learner needs. We believe that this taxonomy of non-traditional education is both complete and parsimonious. We did not find needs identified in state studies that had received no response from program developers, nor did we find extraneous program components that seemed to respond to no need.

At this particular stage in the development of non-traditional education, we believe that a more accurate and concise description of non-traditional programs can be obtained through the use of the component descriptors shown in Chart A than through the "typologies" of students and programs used in the past. With further study, however, it seems possible to develop program typologies through a grouping of programs with similar profiles of components.

Past typologies of learners have consisted largely of demographically described groups such as women, ethnic minorities, senior citizens, etc. As we have seen in the previous section of this report, demographic groupings inevitably show more variation of learning needs and interests *within* categories than between them. The problem of making program evaluations and decisions on the basis of convenient statistical groupings is especially serious as we move into planning for the enormous diversity of backgrounds and goals represented by *adult* learners. Knox (1977) has written that "statistical evidence indicates that at least through the first six decades of life, as people grow older, they become increasingly different from each other" (p. 11). We could probably add that as non-traditional programs respond to this diversity they grow increasingly diverse. Thus it seems the time has come to look at profiles of learner needs and profiles of program responses rather than at demographic groupings of people and typologies of programs.

This section summarizes the findings across studies with respect to learner needs. Section IV describes illustrative responses of educational programs to the needs of non-traditional learners. The following discussion sections are keyed to Chart A.

CHART A

PROGRAM RESPONSES TO LEARNER NEEDS

Learner needs	Program responses
I. ADMINISTRATIVE ACCOMMODATIONS	
A. Need for alternate schedules	A. Provision of alternate scheduling 1. Traditional daytime 2. Evening 3. Commuter block scheduling (e.g., weekends) 4. Residential block scheduling (e.g., several meetings per year) 5. Self-paced within a term 6. Student-determined entirely 7. Other
B. Need for access to learning locations	B. Provision of convenient locations 1. On campus 2. Off campus a. community b. work site c. home d. other 3. Student determined
II. TEACHING/LEARNING CONSIDERATIONS	
A. Need for appropriate learning methods and delivery of education	A. Provision of alternate instructional methods and delivery mechanisms 1. Distance teaching/independent study 2. Instructional materials/devices-based instruction 3. Directed individual study 4. Directed experiential learning 5. Classroom 6. Seminar/workshop 7. Laboratory 8. Assembly 9. Mass media instruction 10. Nondirected experiential learning
B. Motives for learning/Need for content appropriate to goals	B. Content/curricular options 1. Primarily student determined 2. Primarily sponsor determined a. general academic b. adult liberal learning c. occupational/professional d. other

CHART A (continued)

Learner needs	Program responses
III. STUDENT SERVICES	
A. Need for financial assistance	A. Financial assistance 1. Traditional loans, grants, scholarships 2. Employer contributions 3. Employer sponsorship 4. Free tuition
B. Need for information, guidance, advocacy	B. Provision of brokerage and counseling services 1. Information about educational and career opportunities 2. Assessment of student interests and abilities 3. Assistance in matching learner desires with educational opportunities 4. Recruitment of underserved populations through outreach 5. Advocacy
C. Need for orientation to adult learning	C. Provision of orientation programs 1. Establishing or reestablishing academic skills 2. Creating positive learner attitudes 3. Development of educational plans
IV. MEASUREMENT OF EDUCATIONAL ACCOMPLISHMENTS	
A. Need for recognition and certification of non-traditional educational accomplishments	A. Recognition of non-traditional learning 1. Credit by examination 2. Certification of non-collegiate courses 3. Assessment of experiential learning a. prior learning b. sponsored learning
B. Need for recognition of traditional learning	B. Traditional crediting procedures

ADMINISTRATIVE ACCOMMODATIONS

Needs for Alternate Scheaules

Because most adults have job or home responsibilities, adult learners require study schedules that do not interfere with these responsibilities. Most adults can spend, at most, only 10-15 hours per week studying (Central New York, 1975; Iowa, 1976; Ontario, 1976), yet most traditional educational programs are geared to the schedules of full-time students. Nor can most adults learn during the typical work-day hours when most traditional programs are offered. The scheduling of courses at times when they cannot attend is named as a barrier to learning by 25

percent of potential learners in California (1975) and 16 percent nationwide (CNS, 1974).

A majority, or near majority, of potential learners prefer evening study schedules—presumably because evening study does not interfere with their work schedules (Colorado, 1975; Iowa, 1976; New York, 1977); this reflects the fact that educationally and economically advantaged adults are more likely than other adults to find job responsibilities to be obstacles to their participation in learning activities.

A substantial minority of potential learners, however, prefer daytime schedules. This is especially true for those not in the labor market, such as retired persons and women with school-age children. Two-thirds of those over 60 years of age in the Colorado study (1975) preferred to learn during the day; and about half of the women potential learners either preferred daytime schedules or could attend during the day (Colorado, 1975; New York, 1977). Since most of these individuals do not want to study full time, but most continuing education programs are offered only in the evening, these findings suggest that more daytime adult education programs, offered close to home, are needed. Daytime learning is also likely to be acceptable to those individuals able to utilize on-the-job training at their employers' work sites.

Few adults want to study on the weekend—even though weekend schedules would avoid work schedule conflicts for most. Weekend study schedules are the preferred choice of only two to seven percent of potential learners (Colorado, 1975; Northeast New York, 1974; Western New York, 1976). However, somewhat larger percentages of adults say that weekend sessions are acceptable times for learning, even though this may not be their preferred schedule (16 percent in California), or that the day of the week does not matter to them (18 percent in Western New York). Adults with higher levels of education and those who are already participating in continuing education activities find weekend schedules acceptable more frequently than do other adults. In the California study (1975), 33 percent of potential learners with postgraduate education and 20 percent of those with a college degree, but only eight percent of those with an 11th grade education, said weekend sessions were acceptable times for them to learn. In the Iowa study (1976), 25 percent of those already participating in continuing education programs said they could attend Saturday classes, although only three percent were doing so. The evidence suggests that current adult learners and those with higher levels of education are more highly motivated learners and are more willing to give up their weekends for learning. But the data show that even these individuals prefer to learn sometime between Monday and Friday.

Few studies asked respondents if they would be willing to schedule learning activities in concentrated sessions during summer vacation months or several times a year. Such schedules are used successfully as part of a range of learning methods and schedules employed by non-traditional programs such as Britain's Open University and the University of Oklahoma's Bachelor of Liberal Studies Program. However, in those studies which did give respondents the option of such schedules, very few desired them; in the Commission on Non-Traditional Study survey (CNS, 1974), for example, only two percent indicated that their first choice would be to learn for short, full-time periods during the summer. Summer schedules, like weekend schedules, may not offer convenience for women with continuous home responsibilities. It would appear that most employed adults do not want learning activities to interfere with valued leisure time, whether on weekends or during vacation periods.

A final schedule alternative is the totally student-determined schedule. When the schedule is set by the student, learning can be spread out over a longer period of time and can be undertaken at irregular intervals. Therefore, this option can reduce the problem of lack of time (especially due to job and/or home responsibilities), which is cited as a major obstacle to learning participation. However, despite the high visibility of student-determined scheduling in non-traditional programs such as Empire State College in New York and Metropolitan State University in Minnesota, the state needs assessments did not question adults about their interest in setting up individualized study schedules. Because the general public has little knowledge about student-determined schedules, the studies' designers may have felt that adults would be unable to respond to such queries.

Those more likely to cite scheduling problems as barriers to learning are also those more likely actually to engage in learning activities—that is, those with higher levels of education, income, and occupational status (California, 1975; CNS, 1974; Iowa, 1976). These relationships can be seen in Table 5 taken from the California study. Yet, the better educated are more amenable than other potential learners to a larger number of schedule options for learning—more seasons of the year, more days of the week, more

Table 5

Percent of Potential Learners Citing Inconvenient Course Scheduling as a Barrier to Participation in Learning, by Education Level, Occupation and Income Level

Potential learners	Percent citing scheduling as barrier
Educational attainment	
11th grade	10
High school graduate	22
Three years college	29
College graduate	26
Postgraduate	37
Occupational category	
Labor	9
Service	19
Skilled work	28
Clerical/sales	22
Professional/managerial	30
Annual income	
Under $7000	17
$7000-$9999	22
$10,000-$14,999	26
$15,000+	30

Source: California, 1975, p. 60.

self-determined schedules (California, 1975; Iowa, 1976; New York, 1977). Only with regard to times of day are they seemingly less flexible than other potential learners. Presumably job responsibilities prevent studying during workday morning and afternoon hours.

Adults currently enrolled in continuing education programs found inconvenient scheduling of courses a serious problem prior to enrollment; for example, 27 percent of continuing education students in Iowa (1976) said scheduling had been a problem. But these continuing education participants were able to find programs which resolved their scheduling difficulties. In Massachusetts (1973), 70 percent of adult learners chose their programs because of the program's convenient hours (evening). Similarly, program flexibility with regard to scheduling, location, and self-pacing was named as a primary attracting feature by large majorities (62-98 percent) of students in the non-traditional programs examined by Medsker et al. (1975). Since the better educated potential learners are often much like current continuing education participants, this finding again suggests that many potential learners might be enabled to learn if

programs which met their scheduling needs were available.

Access to Learning Locations

Traditional educational institutions–high schools, college campuses, adult learning centers–are the preferred learning sites of half to two-thirds of all potential learners in the state surveys. Conversely, relatively few potential learners prefer to learn in off-campus locations such as home (generally 7-11 percent), community center (typically 2-5 percent), or even work/business sites (typically 5-14 percent). This is so, even though such off-campus locations would reduce the obstacles to learning presented by home and job responsibilities. The desire of people to cling to the familiar surfaces time and time again in the data of adult preferences.

Educational buildings are preferred as learning sites not only because of their convenience (since public schools, and in some states community colleges, are located in every community) but also probably because of their familiarity. As the Central New York study noted (1975),

> adults still strongly associate education with the traditional and familiar school and college sites. . . . [In addition], people [may] feel more comfortable with the idea of studying in their local public school building. (pp. 30-31)

Most potential learners do not favor a college site. In most state surveys, less than a third of the potential learners wanted to learn in a two- or four-year college (e.g., Central New York, 1975; CNS, 1974; Colorado, 1975). But preference for learning location is closely tied both to level of formal schooling and to level of further education desired. Desire to learn at a college location increases consistently with level of formal schooling attained (California, 1975; Colorado, 1975; Long Island, New York, 1976). In Colorado, for example, a college site was preferred by only 21 percent of those with 7 to 12 years of schooling, 30 percent of high school graduates, 38 percent of college graduates, and 41 percent of those with postgraduate education. A college site is also favored by those who wish to undertake "college-level" learning. Among those adults who wish to engage in some form of "further learning beyond high school," nearly half want to learn at a traditional higher education institution (California, 1975; Iowa, 1976).[10] Similarly, potential learners who want to obtain college credit or to study English, health professions, natural science, law, education, or other subjects typically included in a college curriculum, are likely to prefer to learn at a college or university (Central New York, 1975; Florida, 1976; Iowa, 1976).[11] Many potential learners say they are prevented from studying in colleges by barriers of schedules, costs, requirements for full-time study, and location (California, 1975; CNS, 1974; Iowa, 1976).

Because "convenience" (i.e., nearby location) is the most important determinant of adults' choice of learning site (Florida, 1976; Massachusetts, 1973; New York, 1977), college locations appear more likely to be favored when college campuses are near adults' homes and work places. In states or regions where community colleges or other higher education institutions are located in nearly every populated area–and offer adult education programs–more potential learners favor a college or university site than favor any other location. For example, in Florida (1976) 36 percent prefer a college campus, while 18 percent favor learning at a school. In Long Island, New York (1976), a college or university learning site is often favored even by those with less than a high school diploma; 41 percent of this group prefer a college location. It would be interesting to make comparisons regarding site preferences between states with widespread versus limited free-access college systems, but past studies have consistently documented the relationship between accessibility and participation in education (Bashaw, 1965; Bishop & Van Dyk, 1977; Trent & Medsker, 1965; Willingham, 1970).

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[10] The California and Iowa studies asked respondents if they desired "some form of further learning beyond high school." Thus, those who might have been interested in basic educational skills and other less-than-college-level learning (and who might have been likely to choose noncollegiate sites) were excluded from the "potential learner" category. Forty-eight percent of such post-high school potential learners in California and 49 percent in Iowa favored a college location for learning.

[11] Generalizations regarding relationships between location and subject preferences rely primarily on three studies: Central New York (1975), Florida (1976), and Iowa (1976). Few other studies analyzed the interaction of subject and location preference–although clearly such an analysis needs to be undertaken if postsecondary education systems are to be able to plan for non-traditional learners.

College campuses are not frequently preferred by those with low levels of schooling, the elderly, or Mexican-Americans (California, 1975; Colorado, 1975; New York, 1977). One reason that those with less than a college education prefer noncampus locations is that they lack familiarity with a college setting and may be less comfortable studying there; but in addition, the image of the type of learning offered by, and appropriate for, a college strongly affects the choice of learning site. Less well-educated adults typically want to learn vocational subjects, while older persons are often interested in hobbies and recreational fields (California, 1975)—subjects which tend to be perceived as "noncollege" studies. This suggests that if colleges and universities offered more vocational and leisure-time courses, or better publicized those they now offer, they might attract more disadvantaged and older adults. The policy question, of course, is how much higher education institutions should change in order to serve such clientele.

By contrast, public high schools and/or adult learning centers are favored by substantial proportions of those potential learners who are less well-educated, have lower incomes, are older, and are Mexican-American (California, 1975; CNS, 1974; Colorado, 1975). Table 6 shows the proportions of potential learners in California (1975), by education, income, age, and ethnic group, who favored a nearby adult education center, a high school, and a two- or four-year college.

Those preferring to learn in a high school or adult education center often want to study trades, business, social science, or home economics subjects (Central New York, 1975; Florida, 1976).

The stratification by education of potential learners' preferred learning site is reflected in the actual locations used by current continuing education participants. The CNS study (1974) concludes, "Learners at each educational level tended to use the next educational level for learning" (p. 35). Since income level is related to level of educational attainment, universities tend to serve the most advantaged, community colleges the somewhat less advantaged, and public schools and other noncollegiate sites the still less advantaged (CNS, 1974; Iowa, 1976; Massachusetts, 1973).

Among potential learners, work or business sites are more frequently preferred as learning locations by those who are in the labor force, by those in unskilled

Table 6

Percent of Potential Learners Preferring to Learn at an Adult Learning Center, a High School and/or a College Campus, by Education Level, Income Level, Age, and Race

	Education					Annual income			
	11th grade	HS grad	3 yrs. col.	Col. grad	Post-grad	Under 7,000	7,000-9,999	10,000-14,999	15,000+
Adult learning center	30	14	10	14	7	17	10	13	11
High school	6	3	3	1	0	4	3	1	1
College campus	18	37	56	54	65	46	36	50	53

	Age					Race		
	18-29	30-39	40-49	50-59	60+	White	Mex-Amer	Black
Adult learning center	5	14	15	22	35	15	16	14
High school	1	2	*	5	6	3	13	2
College campus	59	44	46	34	30	49	38	41

*Less than 0.5 percent

Source: California, 1975, p. 48.

occupations, and by those with less than a high school diploma (California, 1975). Nevertheless, adults in these groups more often want to learn at a high school or adult education center than at a work or business site. As we would expect, those who favor a work or business site for learning tend to name vocational or business-related fields as the subjects they want to learn (Central New York, 1975; Florida, 1976). However, as we shall see, many of those who want on-the-job training and most of those who want to study business or job-related subjects do not want to learn or train at their work place.

Unlike preference for college site, community center, or job site, preference for study at home does not seem to be consistently linked with certain types of subject interests. We suspect that study at home is chosen by adults such as full-time homemakers or the elderly, who are less able to travel to an educational institution or to other away-from-home locations, but we have inadequate data to document this hypothesis.

Among those few adults preferring to learn at a community center (YMCA, museum, etc.), hobbies and social science subjects tend to be the most frequent subject choices; however, subject choices are scattered (Central New York, 1975; Florida, 1976). Older adults, who are disproportionately represented among potential learners interested in hobbies, are more likely than others to favor a community site (California, 1975).

We have been discussing potential learners' most *preferred* learning sites, but what about the range of locations that potential learners are *willing* to use in order to learn? Those with higher levels of education are more flexible with respect to locations, just as they are with methods and schedules. The CNS study (1974) found that potential learners with at least a high school diploma favor a greater variety of educational sites than do less well-educated potential learners. In addition, the percent of those who say that site makes no difference rises with education level; in New York (1977), 10 percent of those with less than eight years of schooling and 25 percent of those with a college degree or above said learning site made no difference.

Two major conclusions emerge from the data on needs and preferences with respect to location. First, convenience of learning location is cited by adult learners as an important consideration, and past studies have shown that establishing a free-access, low-tuition college in a region increases college attendance significantly.

At tension, however, with that general conclusion is the second finding that emerges from our data. Most people tend to cling to the familiar, sometimes sacrificing convenience in order to achieve credibility or familiarity. Most people prefer to learn in a "school building"—usually the highest one for which they are eligible—and they have rather traditional expectations about what is taught there. The eagerness of the non-traditionalists to respond to the needs of non-traditional learners is frequently met with suspicion and lack of interest on the part of the very people who stand to benefit. It appears that some of the new conveniences of non-traditional education are going to have to gain credibility through familiarity before they will be endorsed by a basically conservative clientele. Nevertheless, well-educated (and usually more self-confident) learners are more willing than their less experienced fellow learners to entertain new ideas about locations, much as they are more willing to experiment with new methods and subjects.

TEACHING/LEARNING CONSIDERATIONS

Needs for Appropriate Learning Methods

No one method of learning is preferred by a majority of potential learners; national and statewide studies of adult potential learners consistently report that adults' choices of learning methods are varied. The figures shown in Table 7 are fairly typical. Notice that although lectures or classes lead all other methods in both preferences and practice, substantial majorities of people would prefer something else. Among the learning methods preferred or accepted most frequently are classes or lectures, on-the-job training, and short-term conferences or workshops—all relatively familiar modes of adult learning.[13] Among the methods least often named by respondents are the newer, more non-traditional and media-based methods: correspondence study, television, and radio or tapes.

Classes or lectures are the most preferred learning method of between 20 and 30 percent of would-be learners in most studies. However, classes are an

[13] Because some studies (for example, CNS, 1974; Florida, 1976; Western New York, 1976) permitted respondents to list only one choice while others (California, 1975; Illinois, 1973; Iowa, 1976) permitted respondents to list or evaluate all methods, percentages are not always comparable. However, the rank order of methods named was generally quite similar for all studies.

Table 7

Percentages of Would-Be Learners Preferring the Method and Percentage of Learners Using the Method

Method	Preferences of would-be learners	Utilization by learners
Lectures or classes	28	35
On-the-job training, internship	21	14
Short-term conferences, institutes, or workshops	13	8
Individual lessons from a private teacher	8	6
Discussion groups	8	4
Study on my own	7	17
Correspondence course	3	5
Group action project	3	2
Travel/study program	2	*
TV or video cassettes	1	*
Radio, records, or audio cassettes	1	*
Other method	*	2
No response	4	8
Total	100	100

* Less than one percent

Source: CNS, 1974, p. 30.

acceptable method of learning for at least 45 percent of would-be learners in the California (1975) and Illinois (1973) studies, which asked respondents to name all learning methods they felt were appropriate or good for them personally.[13]

The lecture or classroom method has greatest appeal to those with college educations, high income, and high-status occupations (California, 1975; CNS, 1974; Iowa, 1976). In California, for example, nearly 50 percent in these groups found classroom learning an appropriate method. Adults desiring college degrees also favor classroom learning. Among students in extended degree programs in the Medsker et al. study (1975), small classes were the most satisfying mode for sizable majorities of the students; and potential clientele for the media-delivered State University of Nebraska (SUN) program (1974) ranked lectures above other learning sources such as books, television, or tapes.

Methods, of course, are related to schedules, locations, and subjects. If held in the evening, classes are a relatively favored method, but day classes are less acceptable than some other modes (California,

[13] Unlike the California and Illinois studies, Iowa (1976) asked all respondents, not just would-be learners, to list appropriate learning methods. Since many respondents expressed no interest in learning, it is not surprising that a smaller proportion of Iowa respondents (perhaps 20 percent) listed classes, or that in general fewer listed other methods. Another problem in ascertaining the extent of acceptability of a learning method is that some studies (especially California and Iowa) integrated method, schedule, and location choices (e.g., evening classes at a college campus) in a multiple-response question. Thus, one cannot determine how many total respondents found classes an appropriate learning method.

1975; Iowa, 1976). In the Florida survey (1976), those preferring the lecture method were more likely to want to learn college courses or business-related subjects than to learn other subjects. But the evidence suggests that even those interested in rather traditional subjects ordinarily taught by lecture-discussion methods are open to and interested in a variety of teaching-learning methods.

On-the-job training is the nontraditional method most often favored by potential learners. In most studies it was the second-ranked method preference (after classes) for the samples as a whole and the first-ranked choice of particular subgroups, such as the less educated. For some reason, the percentages of respondents favoring on-the-job training varied more from study to study than did the percentages preferring classroom learning. Between 11 and 41 percent of potential learners in the different studies most preferred on-the-job training. The fact that a larger proportion of potential learners favor on-the-job training than the proportion of adult learners able to utilize this learning method (CNS, 1974; Florida, 1976; Iowa, 1976; Western New York, 1976) suggests the need for expansion of opportunities for on-the-job learning.

On-the-job training is especially favored by those potential learners whom policy planners often are particularly desirous of reaching—the disadvantaged. In the California study (1975), for example, less well-educated respondents (high school diploma or less), labor or service workers, low-income respondents, and Mexican-Americans favored on-the-job training more often than any other learning mode. Younger respondents and males prefer this method more often than do older or female respondents. As might be expected, those potential learners preferring on-the-job training are more often interested in occupational or technical subjects (Florida, 1976).

Because on-the-job training is often offered by an employer at no cost to the employee and during regular working hours, it would eliminate the two barriers to learning most frequently mentioned by potential learners: lack of time to learn and cost of program. Yet in the CNS study (1974), on-the-job training was the most preferred method of 21 percent of would-be learners, while only five percent chose employer's workplace as their preferred location for learning. (Another 10 percent chose an industry or business site, government agency, or other organizations and agencies as their preferred learning location.) The same disparity between on-the-job method and employer site appears in the California (1975) and Iowa (1976) studies. One hypothesis for this apparent discrepancy is that although a substantial number of adults favor the on-the-job method, many of these learners may want to learn a job in which they would like to be employed but are not now. In any case, this finding suggests that employer-sponsored on-the-job training may not fully meet the training interests and learning obstacles of adults favoring on-the-job learning. This may be particularly true for women not currently in the labor market.

Short-term conferences, institutes, or workshops are preferred by about 13 to 27 percent of potential learners, usually ranking third or higher in the list of preferred learning methods (Central New York, 1975; Florida, 1976). More professionals and managers prefer conferences and workshops than do adults in other occupations (CNS, 1974). The percentage of adult learners currently utilizing this method, however, is lower than the potential learners who would like to utilize it (see Table 7). Unfortunately, although workshops appear to be relatively popular, only a few studies included it in their lists of method choices. As a result, little information is available.

Independent study is the most preferred method of only a small proportion of potential learners (3 to 14 percent). On the other hand, when respondents are asked to name all appropriate learning modes, and when the category is defined as "independent study . . . *in consultation with an instructor*" (emphasis added), the percentage of potential learners who respond that they could learn by this method increases substantially. In California (1975), where these conditions were met, 32 percent of would-be learners listed independent study as an appropriate learning mode. Among current AE students in Iowa (1976), only 6 percent said that (in consultation with an instructor) they could learn through this method.

Interest in individual study as a learning mode generally increases with higher levels of education and income. Adults interested in obtaining a college degree are quite favorable to the independent study method; majorities of students in those extended degree programs which offered independent study or tutorial methods found them to be a satisfying mode of instruction (Medsker et al., 1975). Less well-educated adults do not favor independent study very often (California, 1975; Iowa, 1976). For example, in the California study, 17 percent of potential learners with an eleventh grade education or less, but 49 percent of those with a college degree and 46 percent of those

with postgraduate education said that independent study was an appropriate way for them to learn.

Independent study as a learning mode can reduce frequent obstacles to learning—lack of time and schedule conflicts with job or home responsibilities. Those more likely to list such barriers to learning (potential learners with above-average education and income levels) are also those more likely to favor independent study (California, 1975; Iowa, 1976). Those favoring this learning mode are also likely to note the self-pacing nature of this mode (Northeast New York, 1976).

Media-based instruction such as educational television, radio, video- or audio-cassettes, or newspapers, has been heralded as a convenient means by which adults' learning needs and interests can be met. Yet only a handful of would-be learners in the studies (generally between one and three percent) most prefer such modes. However, as is true of the independent study method, substantially larger proportions of would-be learners (18 percent in California and 37 percent in Illinois) say television or radio is an appropriate way for them to learn—even though it may not be their preferred method. Current adult education students are more favorably inclined toward media-based learning than are potential learners, although very few AE students surveyed were using television or radio for their learning activities. For example, 41 percent of current continuing education students in Massachusetts (1973) said they would personally use an "open university" program (defined as an expanded home television and correspondence program). Potential learners with higher levels of education are generally favorable toward media-based methods. In Northern New York (1976), 70 percent of educational television or radio users had completed or nearly completed a college degree or were already enrolled in educational programs. Those favoring television as a learning mode cite the ability to learn at home as a major reason for their preference (Northeast New York, 1974).

There is, however, some uncertainty about what kind of subjects are favored for learning by television or radio. In rural northeastern California, 37 percent of those interested in attending a local college but unable to do so agreed that they would be interested in "home instruction" (Northeast California, 1972). On the other hand, the Ontario study (1976) found that television, radio, and audio tapes were most frequently mentioned by adult learners who wished to learn job-related, personal development, and recreational courses—and less so by those who wished to study academic subjects.

Findings for respondents favoring correspondence study are comparable to those for media-based instruction, although level of expressed interest in this method is sometimes slightly higher, probably because of its familiarity. Those favoring correspondence study cite its self-pacing nature as well as the ability to learn at home as a major reason for their preference (Northeast New York, 1974). Television, radio, or correspondence learning not only facilitates access to the learning site but also may reduce transportation and child-care costs.

Given the ability of nontraditional methods to reduce or eliminate many of the barriers to adult learning—such as inaccessible learning sites, scheduling conflicts, and costs for child-care and transportation, why do not more adults favor such non-traditional methods? Two factors—lack of familiarity and lack of personal contact—appear to be the main reasons for the lack of enthusiasm for non-traditional learning methods. The authors of the California study (1975) conclude:

> Relatively familiar and conventional approaches to learning are acceptable to more of these [would-be learners] than unfamiliar, new, and seemingly impersonal means. Their conception of education continues to involve a classroom, a teacher, and other students like themselves. (p. 45)

At the same time, those adults most likely to actually engage in adult learning activities—that is, those with high levels of education and interest in learning—are just those adults more favorably inclined toward non-traditional methods. It may be that greater familiarity with and legitimization of non-traditional modes will increase acceptance of such methods by potential learners, without concomitant increases in levels of formal education.

Many potential learners desire the feedback, personal contact, and reinforcement of learning by teachers and peers that classroom learning offers and that individual study and media-based methods do not, according to the Northeast New York (1974) and Northern New York (1976) studies. In a 1974 SUN survey (1974), potential learners considered studying on one's own, if it was to be the only method used, less suitable than classes or other traditional methods of learning; yet most respondents preferred a combination of directed and independent

study. Thus the combination of "impersonal" non-traditional modes (which may still be the most feasible ways to reach many adults) with periodic interaction with instructors and other students may best overcome the situational barriers and meet the psychological needs of many potential learners.

In conclusion, although adult learners tend to prefer teaching-learning methods that are familiar to them, there is a need for alternatives. Despite their relative popularity, traditional classes are the preferred learning method of only about a fourth of the potential adult learners.

The methods of analyses used in the state studies make it exceptionally difficult to study the interaction effects of preferred methods with subject matter. Obviously, there is a strong relationship, and people asked about methods preferences may be dealing not with personal preferences so much as subject-matter stereotypes, e.g., history is taught by lecture; carburetor adjustment by on-the-job training. As people become aware that history, for example, is being exceptionally well taught through television programs such as "Roots" and "Upstairs, Downstairs," the acceptability of alternative methods will no doubt increase.

The desirability of alternative methods is not a matter of promoting non-traditional methods over the more traditional stand-bys. It is really a question of using alternative methods to overcome some of the major barriers to adult learning, such as inflexible schedules and inaccessible locations. The more flexible people can be in using the available methods alternatives, the greater their opportunities for learning. There is clear evidence that those who *do* participate in educational activities as adults use a greater variety of learning methods than either would-be learners or disinterested adults would prefer. The fact that they can utilize alternatives increases their opportunities which in turn increases their familiarity and acceptance of alternative methods. Once again, the familiar cycle is apparent; advantaged learners are in the best position to take advantage of learning opportunities.

Motives for Learning

Burgess (1971) states that adults' motives for learning can be determined in at least four ways: 1) inferring their motives from the subjects adults study, 2) asking them to state in their own words why they want to learn, 3) asking them to select their reason or reasons for learning from a list provided by the researcher, or 4) concentrating on adults' orientation to education. There is, of course, a strong relationship between desired subjects, reasons, and orientations. Nevertheless, each method provides a different perspective on adults' motives, and each has its shortcomings. For example, when adults are asked to select from a list all those reasons that influence their desire to learn, examination of their responses indicates that they most frequently name reasons that are socially desirable, such as for "personal fulfillment." On the other hand, inferring motives from subjects chosen can be risky, since one adult may desire a course (say, typing) for job-related reasons while another may want it for personal use and enjoyment. Using more than one measure helps us obtain a better picture of adults' motives.

Most state needs assessments ask adults about both subject preferences and reasons for learning (either in their own words or selected from a list). Therefore we will examine in turn the subjects adults choose and the reasons they give for learning and wanting to learn. To the extent the data enable us to do so, we will also examine the interaction between subject preferences and reasons for learning.

SUBJECT PREFERENCES

Adults often express interest in learning several subjects. Among the subjects most frequently mentioned by potential learners are vocational/professional, hobbies and recreation, and home and family subjects. Many also name general education and personal development subjects (CNS, 1974; Iowa, 1976; Western New York, 1976).

When potential learners are asked to name their first-choice subject, however, they become highly pragmatic, serious, and occupationally oriented. About half of all potential learners name, as their first choice, subjects that are vocational or professional (California, 1975; Central New York, 1975; CNS, 1974).[14] Indeed, would-be learners are more job oriented than are adults currently engaged in adult education programs; somewhat over one-third of all

[14] The Long Island, New York study (1976) is an exception; in this study only 22 percent of potential learners chose vocational/technical subjects, and 48 percent chose general education subjects. However, professional subjects were not included in the list of subject areas from which respondents could choose; perhaps many of the potential learners (among whom highly educated adults were disproportionately represented) considered professional subjects to be in the general education category.

adult learners are studying vocational or professional subjects (CNS, 1974; Ontario, 1976).

Among the most frequently chosen vocational/professional subjects are business skills or administration, trades or technical subjects, and nursing (Central New York, 1975; CNS, 1974; Iowa, 1976; New York, 1977). In the CNS study, nine percent of potential learners named business skills as their first-choice subject and 26 percent listed it as one of the subjects they would like to learn.

Interest in vocational fields generally declines as education level rises (California, 1975; Central New York, 1975; Iowa, 1976). In California, for example, 51 percent of potential learners with up to 11 years of schooling and 47 percent of high school graduates picked vocational/professional subjects as their first choice; only 26 percent of those with postgraduate education did so. Despite their high interest in vocational subjects, the less educated are much less likely than those with higher levels of schooling to actually study vocational subjects (Iowa, 1976; Ontario, 1976). The Iowa study (1976) concludes:

> A large portion of those few low-income, low previous education respondents who expressed an interest in further learning at all, chose technical skills. Yet almost none followed through with a statement of plans to pursue training in these areas. (p. 84)

Interest in vocational/professional subjects also varies by sex and age. Congruent with sex-role stereotypes, men are somewhat more interested than women in most vocational/professional subjects—except those linked to "female" occupations such as business skills (e.g., typing, shorthand), nursing, and education (CNS, 1974; Florida, 1976; Iowa, 1976). Interest in vocational/professional subjects drops sharply after about age 55, when potential learners become more interested in pursuing avocational and general knowledge topics (California, 1975; Florida, 1976; New York, 1976).

Many of those desiring nonprofessional vocational subjects want employer-sponsored training at a work site, a public school, or a community college (Central New York, 1975; Florida, 1976; Iowa, 1976). For example, among those interested in business skills in the Iowa study, a third desired employer-sponsored training, and a fourth preferred a community college location. On the other hand, those wanting to learn professional subjects such as education, nursing, or law are more likely to prefer a college or university location, and most want college credit (Central New York, 1975; Iowa, 1976). Those interested in professional subjects have completed more schooling than have those interested in nonprofessional vocational subjects; and, as always, the more educated individuals express greater interest in college sites and in a wider range of learning methods (Iowa, 1976).

There is not a heavy demand among potential learners for general education and traditional college academic subjects. The CNS study (1974) remarks,

> Academic professionals will find it somewhat disheartening that adult Americans are so little interested in traditional liberal arts subjects or, for that matter, in such public affairs topics as community and environmental problems. (p. 20)

Generally, no more than one-fourth or one-fifth of potential learners name general education fields as first-choice subject preferences (Illinois, 1973; Iowa, 1976; Western New York, 1976).[15] But 30 to 50 percent of potential learners express some interest (not first-choice interest) in general education subjects.

Well-educated potential learners, those interested in college credit or college-level courses, and current adult education participants all express more interest in general education than do most other adults (Central New York, 1975; CNS, 1974; Iowa, 1976). In Central New York (1975), social science, natural science, or foreign language subjects were named as first-choice interests by 7 percent of potential learners with less than a high school diploma, 16 percent of those with one to three years of college, and 29 percent of those with graduate education. However, when basic skills subjects (such as reading) are included under general education, those with relatively high interest in general education divide into two groups: those with very little formal schooling and those with high levels of formal education (CNS,

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[15] Two apparent exceptions are the Florida (1976) and Long Island, New York (1976) studies. In Florida 46 percent of potential learners were described as naming a general education topic as their first-choice interest. However many more subjects appear to have been included under the general education rubric in Florida than in most other studies. We have already commented on the high percentage (48 percent) of those naming general education as a first choice in the Long Island, New York study.

1974). Clearly, these groups are seeking different kinds of general education.

Among the general education subjects, psychology (especially personal psychology) and other subjects oriented to personal concerns are popular (New York, 1977; SUN, 1972). Some educators suspect, however, that much of the popularity of courses like psychology is based on misconceptions of the actual content of academically based courses. Many people who sign up for psychology courses may be in search of how-to-do-it courses that will help them in daily personal interactions with family and co-workers. A study of part-time adult students in California community colleges concludes that, although they often enroll in the same classes in which students pursuing degrees and certificates are enrolled, many adults have personal growth objectives which they seek to achieve outside of degree and certificate programs (California Postsecondary Education Commission, 1976).

Hobbies, home-and-family living, and personal development subjects have a very wide appeal among potential learners, although not a very strong appeal. Relatively few potential learners pick these fields as first-choice subjects, but majorities express an interest in these areas (Central New York, 1975; CNS, 1974). The typical extent of first-choice interest and of any interest in these subject areas is illustrated in Table 8 taken from the CNS (1974) study.

The Iowa study concludes:

Table 8

Selected Learning Interests of Would-Be Learners (N=3001)

Category and topic	Percent reporting any interest in topic	Percent reporting first-choice interest in topic
Hobbies and recreation	63	13
Crafts	27	3
Fine and visual arts	16	2
Flight training	11	2
Performing arts	14	2
Safety	16	0
Sports and games	28	2
Travel	22	2
Home and family living	56	12
Child development	17	4
Gardening	26	2
Home repairs	25	2
Sewing, cooking	27	4
Personal development	54	7
Investment	29	4
Occult sciences	7	0
Personal psychology	15	2
Physical fitness	26	1
Public speaking	11	0

Source: CNS, 1974, p. 19.

> The adult and the non-traditional learner is more likely to *demand* learning opportunities which help him or her in the marketplace, but may *want* to learn other things that conform more closely to the notion that learning is mainly "to be better informed" or "for personal satisfaction." (p. 37)

Interest in learning hobbies is especially high for older potential learners (those 60 years of age or older) who, as they leave the job market, are looking to learning progarms that will satisfy avocational leisure-oriented interests (California, 1975; Florida, 1976). In California, for example, one-third of potential learners over 60 years of age picked arts and crafts as their first-choice subjects. Interest in recreational courses is also greater among women, Caucasians, and those with postgraduate education (California, 1975; Central New York, 1975; CNS, 1974). Most adults are interested in hobbies and recreational activities because of the social activity and personal satisfaction these fields offer. Not surprisingly, they are not interested in certificates or degrees for these studies (Iowa, 1976).

Personal development subjects (e.g., physical fitness, investment) and home-and-family living subjects (e.g., child development, sewing) are each selected as first-choice subjects by 12 percent or less of potential learners (CNS, 1974; Florida, 1976; Western New York, 1976). Women are much more likely than men to express interest in home-and-family subjects, and adults with postgraduate education levels are more likely than other potential learners to choose personal development topics (California, 1975; CNS, 1974; Florida, 1976). In a sense, such subjects are luxuries that can be more easily afforded by those with more education and income (CNS, 1974).

Few potential learners express any interest in studying community or public affairs. Only about three to five percent name such topics as first-choice interests (CNS, 1974; Iowa, 1976; Western New York, 1976); and a third at most express any interest in these subjects (CNS, 1974).

The need for variety in educational offerings is apparent in the wide range of specific subjects in which adults express interest. In the California study (1975), 167 different subjects were mentioned as first-choice selections. Similarly, current participants in continuing education are interested in many subjects in addition to those they are now learning. In the Massachusetts (1973) and Northeast New York (1974) studies, majorities of current continuing education students expressed interest in more courses in academic fields and in professional or graduate-level subjects; in addition, one-third to nearly one-half desired more arts and crafts courses or personal-interest subjects, more business-oriented courses, and more social and community service subjects.

Most subjects that interest adults are those that are or could be offered by traditional educational institutions (California, 1975; Central New York, 1975; Florida, 1976). The California study notes: "Only a few [of the desired subjects] would not have credibility within existing academic or occupational training circles" (p. 39).

While most subjects desired presumably are being offered, there are nevertheless complaints about what is not available. In the California study, 12 percent of adults who wanted to learn said that available courses were not useful or practical, and 11 percent said that available courses were not interesting to them.

There is apparently some need for new *arrangements* of subjects and for ways to assemble educational resources offered by a wide variety of school and nonschool institutions. This need is greatest for adults who have a sustained interest in an unusual or interdisciplinary field, especially when they want their studies to be recognized through college degrees or job certification. Peterson and Hefferlin (1975) argue:

> Older and more mature adults often have wide-ranging interdisciplinary interests that do not fit neatly into conventional degree programs, whether on or off campus. . . . Today, although the pieces of such individualized programs exist in hundreds of courses, these mature learners cannot assemble them into a pattern leading to a degree. (pp. 61-62)

High interest in individualized study programs that allow students to determine unique curricula for learning was present in the Medsker study (1975) of students enrolled in non-traditional degree programs. A majority of students in most programs said that the "individualized approach" was an important feature in attracting them to the programs. Unfortunately, few state and regional needs assessments queried adults about their interest in individualized student-determined study programs. Yet, when learning is

constrained by external certification requirements, the flexibility of an individualized curriculum becomes important.

REASONS FOR LEARNING

Extensive research on adults' reasons for learning has been conducted. In a seminal contribution, Houle (1961) identified three motivational orientations of adult learners: goal orientation, activity orientation, and learning orientation. From this basis, a number of taxonomies of adults' reasons for learning have been developed, mostly through factor analysis of a pool of items regarding possible reasons for learning.

Burgess (1971) hypothesized eight preliminary motivation clusters. He then screened a list of 5,773 reasons, finally coming up with 70 items representative of the initial eight clusters. A factor analysis of the responses of 1046 adults to a questionnaire employing the 70 items revealed seven interpretable factors; 1) desire to know, 2) desire to reach a personal goal, 3) desire to reach a social goal, 4) desire to reach a religious goal, 5) desire to escape, 6) desire to take part in a social activity, and 7) desire to comply with formal requirements. Numerous other factor analytic studies have been conducted regarding adult motivations for learning (see Dickinson & Clark, 1975). Although each study finds somewhat different factors, there is considerable similarity of categories (in part because similar instruments were used). Most of the state and regional studies, as well as the CNS study, either explicitly or implicitly utilized the categories of learning motivations developed by factor analytic research.

For the present analysis, we have chosen to adopt and adapt the categories identified in previous research which best seem to fit the data from the state studies.[16] We therefore classify reasons for learning into six major categories:

1. desire to achieve practical personal goals—especially to get a new job or advance in one's current job, or to improve one's income;
2. desire to achieve personal satisfaction and other inner-directed personal goals, such as personal development and family well-being;
3. desire to gain new knowledge, including the desire to learn for its own sake;
4. desire to achieve formal education goals (degrees, certificates, etc.)
5. desire to socialize with others and/or to escape from everyday routine; and
6. desire to achieve societal/public welfare goals.

Potential learners' primary reasons for learning are usually—but not always—related to the subjects they want to study. Those interested in learning vocational subjects tend to cite a job-related reason as their main reason for learning, while those choosing nonvocational subjects list nonjob-related reasons (New York, 1977). Since a majority of potential learners name vocational/professional subjects as their first-choice interests, it is not surprising that more potential learners (34 to 58 percent) say their most important reason for learning is job-related than mention any other reason (Long Island, New York, 1976; New York, 1977; Western New York, 1976).[17] But potential learners have several motives for learning in addition to their main reason. Half to two-thirds say that gaining new knowledge and achieving personal satisfaction are among their reasons for learning—just as half or nearly half say that hobbies, personal development, and general education subjects are among those subjects in which they are interested (California, 1975; Iowa, 1976; Northeast New York, 1974).[18]

The strong relationship between job-related reasons and choice of vocational or professional subjects becomes clear when we analyze the reasons of those adults who prefer vocational subjects separately from those who prefer nonvocational topics. In the New York study (1977) three-fourths or more of those potential learners whose first-choice subject was a vocational or professional field said their main reason for wanting to learn was job-related. The New York

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[16] For example, we have not included religious motivations, since most of the state studies (which were largely concerned with response of educational institutions to learners' interests) did not ask questions designed to elicit religious motives. Our categories rely most heavily on Burgess (1971), the Ontario study (1976), and the CNS study (1974).

[17] The Florida study (1976) is an exception. In Florida, 25 percent of potential learners said their most important reason for wanting to learn was job-related, but 39 percent said their main reason was a desire to be better informed.

[18] These figures are based on questionnaires which asked potential learners to list all or several reasons they felt were important in their decision to pursue further learning.

figures for a number of vocational/professional subjects were as follows:

First-choice subject	Percent whose main reason was job-related
management skills	85.2
education	83.5
nursing	80.4
computer science	80.4
sales and advertising	76.6
engineering	74.7
business skills	74.3
high school equivalency	74.2
protective services	73.7
service occupations	70.5

Many who want to study subjects not typically classified as occupational (such as basic education skills) have practical goals (job or income reasons) in mind. In New York (1977), for example, 74 percent of those who said high school equivalency preparation was their first-choice study area said the main reason for their interest was job related.

Knowing what reasons do *not* motivate specific groups of adults to seek learning is perhaps as important as knowing what reasons do motivate them. In their typology of adult learners, based on identification of unique patterns of motivational orientations to learning, Morstain and Smart (1978) found that "Career-Oriented Learners" have high interest in professional advancement but little interest in learning for its own sake.[19] Morstain and Smart conclude that institutions' ability to attract and meet the needs of these Career-Oriented Learners may hinge on the direct practical relevance these learners perceive career-oriented programs to have.

Potential learners who most want learning in order to meet job needs or to increase income are the less advantaged—those with lower levels of education, lower income levels, and unskilled or semiskilled occupations (California, 1975; New York, 1977; Western New York, 1976). A majority or near majority of these less advantaged potential learners name getting or advancing in a job or improving income as their main reason or a very important reason for learning (Colorado, 1975; New York, 1977). These individuals are looking to adult education as a means out from the bottom. However, job-related reasons were at least of some importance to many of the more educated, particularly those with one to three years of college (California, 1975; Iowa, 1976; Ontario, 1976). Nonwhites, who more often have less income and less schooling than whites, are more likely than whites to name job or income reasons for learning (California, 1975; Colorado, 1975; Illinois, 1973). More men than women named job-related reasons; job reasons for learning declined sharply among older adults (Colorado, 1975; Iowa, 1976; Ontario, 1976). These relationships are congruent with the vocational subject interest patterns of these groups.

Learning for personal satisfaction, for personal development, or to be a better parent or spouse is important to most potential learners. Although only one-third or fewer potential learners name personal satisfaction as their *main* reason for learning (New York, 1977; Western New York, 1976), in most studies half or more of the potential learners mention this motive as one of their reasons for learning (California, 1975; CNS, 1974; Colorado, 1975; Northeast New York, 1974). Women and Caucasians are especially likely to list personal satisfaction or development as one of their reasons for learning (California, 1975; Iowa, 1976).

On the other hand, large numbers of those who desire to learn nonvocational subjects *do* cite a desire for personal satisfaction as their most important reason for wanting to learn (New York, 1977). Moreover, some adults who want to learn subjects usually considered to be occupationally oriented are motivated primarily by personal satisfaction and other nonjob-related reasons (New York, 1977). This may be particularly true of such business skills subjects as typing and accounting, which many individuals probably want as an aid in preparing personal correspondence, home budget management, and so forth. For example, in the New York study (1977) one quarter of those interested in business skills, engineering, or sales and advertising subjects said the primary reason for their interest was not job related. Schools and colleges need to know why adults in fact engage in specific "vocational" courses or seek to do so, if the institutions are to provide course content appropriate to adults' actual purposes.

The desire to gain knowledge, to be better informed, or to satisfy one's curiosity is, as we have

[19] The other adult learner types identified by Morstain and Smart are "Non-Directed Learners, Social Learners, Stimulation-Seeking Learners, and Life-Change Learners."

noted, of some importance to a majority of potential learners. Again, those interested in nonvocational subjects are more likely than those choosing vocational fields to name gaining knowledge as a reason for learning (New York, 1977; Ontario, 1976). Women and the well-educated, especially those with a college degree or postgraduate education, express more interest in learning for knowledge reasons than do other potential learners (California, 1975; Colorado, 1975; Long Island, New York, 1976). The percent of adult potential learners saying that to gain knowledge is their most important reason for learning varies widely, perhaps reflecting the differing levels of educational attainment of the samples. Less than 10 percent of those in New York (1977) and Western New York (1976), but 28 percent in Long Island, New York (1976) and 39 percent in Florida (1976) said that gaining new knowledge was their most important reason for wanting to learn.

Relatively small proportions of potential learners list one or more of the other three types of reasons for learning. To work to obtain an educational degree or certificate is given as a reason (but usually not the main reason) by 12 to 28 percent of potential learners (Iowa, 1976; Northeast New York, 1974; Western New York, 1976). To obtain a degree or certificate is, of course, usually a step toward some other goal, such as to enter a profession or to gain information. Younger persons and those with one to three years of college are more likely to say they want to learn in order to obtain a degree or certificate (California, 1975).

The desire to learn in order to socialize with other people or to escape from daily routine is named as a reason for engaging in learning activities by over a third of potential learners (California, 1975; Iowa, 1976; Northeast New York. 1974). Two percent of potential learners in New York (1977) and 10 percent in Western New York (1976) said such motives were their most important reason for wanting to participate in further learning programs. Socializing or escape reasons for learning participation are often mentioned by those interested in hobbies and recreational subjects. For example, in the Iowa study (1976) 90 percent of adults interested in crafts subjects listed meeting new people, getting away from routine, or getting into something new among the reasons for their learning interest; many of those choosing home-and-family subjects gave these same reasons. Women and those with low levels of schooling are more likely to see learning activities as an opportunity for them to escape unrewarding duties and to meet new people (California, 1975; Iowa, 1976; Ontario, 1976).

Only about one-fourth of potential learners say that achieving societal goals or solving community problems is one of their motives for engaging in adult education programs; and only one to two percent say it is their main reason for wanting to participate (California, 1975; CNS, 1974; Iowa, 1976; New York, 1977; Western New York, 1976). Clearly, most potential learners are prompted by personal and individual concerns in seeking out further learning.

In conclusion, all of our data thus far show the powerful role of motivation in adult learning. Past research indicates that adult motivations for continuing education may be described by six factors or categories:

1. Desire to achieve practical personal goals—to get a new job or advance in a current one, or to improve income.

The desire to improve one's personal lot in life remains the primary motivation for adult education. Those who do not have good jobs would like to get new ones; those who have fairly good jobs would like to advance; those with low incomes would like more money. Education is seen as the primary route to upward socio-economic mobility, and vocational/professional education is the first choice of the majority of learners and would-be learners. Those who are not participating in education (and are less advantaged) are even more interested in job-related education than their more advantaged peers who have the luxury of using education to improve the quality of life off the job as well as on.

2. Desire to achieve personal satisfaction and other inner-directed personal goals, such as personal development and family well-being.

The use of education for personal satisfaction is a luxury most people wish they could afford. While majorities of potential learners are interested in the nonvocational learning offered by courses for hobbies, home and family living, and personal development, such subjects are rarely cited as first choice. The exception occurs among older people who are quite likely to use education for leisure-time pursuits.

3. Desire to gain new knowledge, including the desire to learn for its own sake.

In one sense, this generalized idealized motivation for learning is so socially acceptable that it is offered by most people as an important motivation for learning. Although it is difficult to obtain any behavioral verification since almost any subject–from macrame to engineering–could be studied because the act of studying it or knowing more about it is satisfying, nonvocationally oriented learners are more likely to say they are interested in knowledge for its own sake than are career-oriented learners. Apparently the average adult learner does not regard traditional liberal arts courses as the foundation subjects that will satisfy his or her need for new knowledge. Only small minorities of adult learners express a strong interest in traditional discipline-based subjects, and these learners predictably are those with high levels of educational attainment.

4. Desire to achieve formal educational goals (degrees, certification, etc.).

The pursuit of degrees is strongly associated with level of educational attainment and with desire for job advancement. Younger persons and those with one to three years of college are very likely to be degree-oriented whereas the desire for credit or certification drops off sharply for those over 55 who are no longer interested in career advancement. While working for credit is not usually given as a primary motivation for education, a desire for some formal recognition is in keeping with the pragmatic orientation of most adult learners.

5. Desire to socialize with others and/or escape from everyday routine.

A surprising number of adults (over one-third) are frank to admit that escape is, for them, a reason for pursuing coursework. It is rarely, however, offered as the primary motivation. Nevertheless there are certain groups of people for whom education serves as escape and an opportunity to meet new people. Such learners are quite likely to be interested in hobbies and recreational subjects and they are likely to be people who lack other social outlets–the elderly, women confined to home and family, etc. Unfortunately, many of those most eager for social contact may lack the mobility to participate in group learning activities. Whether home-delivered education to socially isolated learners can be designed to serve such people remains to be seen.

6. Desire to achieve societal goals.

The desire to learn to be a better citizen is not a strong motivation for learning, although about one-fourth of the potential adult learners cite it as one motivation among others. Those experienced with the market fluctuations for extension and noncredit courses have observed, however, some apparent societal motivations when there is a surge of demand for courses on energy or ecology, for example. The state needs assessments reviewed here offer little information about the reaction of people to particular social concerns that fluctuate as a result of the visibility given to an issue by the nonformal educational network of television and the popular press.

The overall picture that emerges from the data on adult motivations for learning is that adults are pragmatic learners who pursue education for its practical utility to them. A frequently ignored observation is that whereas young people learn more or less what they are told to learn, adults usually learn to an end that is clear to them. Any attempts to serve a "voluntary" learning force will need to understand, better than we do now, the real motivations of adult learners.

STUDENT SERVICES

Need for Financial Assistance

Adults with incomes below $10,000 per year are underrepresented in adult educational programs, and the extent of their underrepresentation bears a direct relationship to the extent of their financial disadvantagement. The modal income of the participants in AE in 1972 was $10,000-$15,000 per year with 30 percent falling in that income bracket (NCES, 1972).

The cost of education, including tuition, books, childcare, and transportation, is cited by over half of those interested in further education as a barrier to their continued learning (NCES, 1972). Cost is cited

as a barrier most frequently by women, the poor, and younger potential learners (California, 1975; Central New York, 1975; Western New York, 1976).

Women are more likely than men to mention cost as a barrier to educational opportunity, 48 percent for women to 35 percent for men; and men are more willing to pay for their education than women, with 19 percent of the men but 50 percent of the women saying they cannot pay more than $45 per course (California, 1975). Yet there is no evidence that women learners come from lower-income groups than men. National figures show that 32 percent of white male learners report family incomes of less than $10,000 per year, compared to 35 percent of the women (NCES, 1972). The best explanation for the differences between men and women in their perceptions of the cost barrier seems to lie in cultural mores that accept education as more important for men and/or that men have more access to family income than women. In addition, women have less opportunity to obtain tuition reimbursement from employers, the GI Bill, or other sources. For example, among current continuing education students in Massachusetts (1973), 59 percent of males but only 24 percent of females said they were being reimbursed for their tuition costs, primarily by employers and secondarily by veterans' subsidies.

The issues surrounding financial need are complex. There is the question of the relationship between "real" and "perceived" financial need, and there is also some evidence that "willingness to pay" is not necessarily the same thing as "ability to pay." How much faith should be placed in the data showing how much respondents to a survey would be willing to pay for education is debatable. But the question is a popular one in market surveys. The CNS national study showed that while 23 percent indicated an unwillingness to pay anything, 42 percent said they would pay between $50 and $200 per course.

The California study (1975) showed that willingness to pay is related to income; 17 percent of those with incomes under $7000 compared to 2 percent of those with incomes over $15,000 said they could pay nothing. But Table 9 also shows that, especially in the cost range of $45 to $104 for a three-credit course, educational attainment is more closely related to willingness to pay than is annual income. Nevertheless, over 40 percent of those with annual incomes of $10,000 or more say that they can pay less than $45 for a three-credit course, and it is a common finding of state studies that even the most likely candidates for external degrees (those with some college education) cite cost as a major barrier to learning (California, 1975; Long Island, New York, 1976; Western New York, 1976).

The barrier of cost is a problem for higher education institutions as well as for potential learners. The study of resources conducted in Central New York (1975) reported that of six sponsors of educational services for adults the highest charges were

Table 9

Percent of Potential Learners Responding to Question, "What is the highest amount of money you would be willing to pay for a course . . . that provides three units credit?"

	Educational attainment					Annual income			
	11th grade	HS grad	Col. 1-3 yrs.	Col. grad	Post-grad	Under 7,000	7,000-9,999	10,000-14,999	Over 15,000
Can't afford anything	26	10	8	2	0	17	8	9	2
Less than $45	38	37	38	28	26	31	34	37	38
Between $45 – $104	8	19	24	36	44	23	16	20	32
$105 and more	5	9	10	20	13	12	18	14	10
Not sure/No answer	22	25	19	13	18	18	25	19	19

Source: Adapted from California, 1975, p. 58.

made by institutions of higher education. And continuing education participants in Massachusetts (1973) state that they would take more courses if they were less expensive. But despite all of the confusion surrounding the data on financial need, most people would agree that we must be doing something right in the funding of nontraditional students. Consistently, in each of the six income brackets below the $10,000 mark, low-income learners are overrepresented among those receiving public funding for their education (NCES, 1972). Cumulatively, 23 percent of the total participants in AE reported family incomes below $10,000, but 50 percent of them received public funding for their educational activities. Those with annual incomes of $10,000 to $25,000 were overrepresented in employer-funded education with 54 percent of adult learners in that middle salary range but 64 percent receiving funding from employers. Those with salaries over $25,000 were overrepresented in self-supported education and that supported by professional associations. The higher income groups ($15,000 and over), although receiving some public support for education, represented 30 percent of the AE participants but only 19 percent of those receiving public funding (NCES, 1972).

Needs for Educational Information and Guidance

Adults are quite clear in their desire for more and better information on educational opportunities, and many want a wider range of counseling services than is now usually provided. The authors of a California study of postsecondary education alternatives for adults (Peterson & Hefferlin, 1975) conclude:

> Of all the needs for expanded postsecondary opportunities in California, *the most critical is simply information about existing opportunities.* Large numbers of people know that they want to study something, but they have no convenient way or no central location to find out the options available to them. (p. 56)

Perhaps one-fourth of all potential learners do not know where to go or whom to ask to get expert advice about a course or program (Iowa, 1976; Western New York, 1976). Even when they say they know where to go for advice, many adults do not have the specific information they need in order to undertake learning; for example, 28 percent of the adults surveyed in the Central New York study (1975) said they did not know what courses were available in their area. The lack of specific information about educational opportunities presents an obstacle to learning participation for perhaps 15 to 20 percent of potential learners (CNS, 1974; New York, 1977).

That information which adults do have about program offerings appears to be limited largely to knowledge of traditional school and college courses. The Northeast New York study (1974), for example, found little knowledge about non-traditional programs and services in the region. At best, less than one-third of the respondents had even heard of SUNY's Empire State College (31 percent of past users of adult education programs and 19 percent of nonusers); and only a handful were aware of New York State's Regents External Degree Program (6 percent of nonusers and 15 percent of past users). Thus, adults have scant information about the very programs that were intended to meet their special problems and learning needs.

A majority of potential learners—and substantial numbers of those describing themselves as not currently interested in learning—express interest in receiving additional information or counseling on adult learning opportunities (California, 1975; Central New York, 1975; Iowa, 1976). For example, 85 percent of adults in the Central New York study said they would like to be kept better informed of continuing education offerings, even though nearly three-fourths of the respondents said they knew about courses in their communities. In the New York study (1977), 70 percent of potential learners said they would find counseling services useful and 47 percent said they did not have enough information about local continuing education courses.[20] The desire to receive counseling services is also high among those already participating in formal continuing education programs (presumably those who already have high access to information); nearly two-thirds of continuing education students in Massachusetts (1973) and over half of those in Northeast New York (1974) wanted more information on educational programs.

Persons who have job-related learning interests are slightly more likely than other potential learners to

[20] In the Western New York study (1976) only 37 percent of the potential learners said they would like to talk to someone for advice and information on educational matters. It may be that many more adults want assistance but do not find a traditional counseling session suitable.

say they do not have enough information and to feel that counseling services would be useful to them. A third of the respondents in the New York study said they would be very likely to consult an adult education counselor about job-related courses. In addition, 29 percent said they would be very likely to consult a counselor about financial assistance for education (New York, 1977).

One reason many potential learners do not have information about adult learning programs even when they say they know where to find help is that educational programs are not disseminating information in ways which will get the attention of adults against the background of competing voices for their attention. This is evident from the reports of those who are participating in institutional continuing education programs, where a majority said they found the programs through their own search of schools in the area (Massachusetts, 1973). In the Central New York study (1975), would-be learners wanted educational providers to make greater use of the media to disseminate information. In New York (1977) the popularity of radio and television for receiving adult education information was highest among those with the least formal education and the lowest income levels. Seventeen percent of those with eight or fewer years of education but only 3 percent of college graduates felt that radio or television was the best method for obtaining information about AE opportunities. But the best method may vary with locale. In the Central New York study (1975), 38 percent most preferred information from newspapers and 27 percent preferred printed bulletins; but in New York as a whole (1977) only 19 percent preferred newspapers while 50 percent preferred mailed notices.

In addition to impersonal information channels, adults want personal sources of advice but may not get them. The Central New York study (1975) notes that although a majority of respondents named school or college counselors as sources they would seek to use, counselors may be available only during daytime hours when working adults cannot see them. Also, counselors attached to a particular institution may be unaware of educational opportunities in another institution, in a non-traditional program, or in a nonschool organization. And there is always the suspicion, well-founded or not, that college-employed counselors may be reluctant to refer an individual to a "competing" organization.

Adults are often unaware of the functions and services of counseling agencies that are available to them. Noting a sense of confusion about the functions of advisement centers, the Western New York study (1976) suggests,

> It is highly possible that this confusion is shared by persons not interested in using such services. Perhaps their lack of interest is in part due to vagueness about the functions of such services. (p. 125)

When adults are made aware of the opportunities for new kinds of counseling services, many express a high degree of interest in new services. In particular, adults would like assessment and testing of their interests, competencies, and skills (California, 1975; Iowa, 1976).[21] In California, 31 percent of potential learners were interested in obtaining an assessment of their personal competencies; 28 percent of potential learners wanted to have their strengths and weaknesses in various subjects and skills tested. The desire for assessment and testing services is especially prevalent among less well-educated and poorer would-be learners (California, 1975). Only 15 percent of potential learners and 39 percent of all respondents in California said they would not be interested in any educational services.

The unmet need for informational and counseling services is especially great among disadvantaged would-be learners. The disadvantaged, especially those with low levels of education (in several studies the poor and the elderly as well), are much less likely than other potential learners to know where to get advice (Iowa, 1976; Western New York, 1976). They are less likely to have specific information about course offerings (Central New York, 1975; New York, 1977), and are less likely to have used counseling services in the past (Western New York, 1976). Yet potential learners with low levels of schooling express more desire for information and counseling services than do better educated adults; similarly, nonwhites want counseling services more often than do whites (New York, 1977; Western New York, 1976). Table 10 compares knowledge about advisement services and desire for them, by educational level, for the Western New York survey.

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[21] Among major state studies, only the California and Iowa studies specifically queried adults about their interest in new types of educational services, such as assessment of competencies, testing of skills, evaluation of work experiences for credit, and so forth.

Table 10

Knowledge of and Desire for Advisement Services, by Education Level

Education level	Percent knowing location of advisory & information sources	Percent desiring to discuss adult learning activities with someone
0-7 years	29	47
8-11 years	62	
12-15 years	75	37
16 or more years	92	27

Source: Western New York, 1976, pp. 113 and 121.

In summary, most needs assessments verify the existence of substantial interest in more information about educational opportunities. The demand seems to be not so much for traditional counseling services as for simple, direct, up-to-date information about courses, costs, schedules, locations, etc. There is probably widespread agreement among learners and potential learners as well as sponsors of educational services with the California conclusion: "Of all the needs . . . *the most critical is simply information about existing opportunities.*"

In addition, there seems to be a rising interest in some of the new services that are offered by counseling and assessment centers. Not many state studies asked adults about their interest in the assessment of personal competencies, and few adults are aware of emerging opportunities to convert prior learning into educational credits through assessment procedures. However, where respondents were asked about their interest in some of the new activities, there appears to be significant interest.

Aside from the efficiency arguments for letting people know what learning opportunities are available to them, there is evidence that the poor and educationally disadvantaged have special needs and interests in getting help and information in matching their capabilities and interests to educational and job opportunities.

Needs for Orientation and Other Support Services

Although most state studies have not given much attention to needs for support services such as job referral, childcare, and school reentry orientation, there is some evidence that a high demand for such services exists.

Because many potential learners want to pursue learning activities in order to obtain new jobs or advance in their current jobs, job referral and employment counseling and placement services are a needed adjunct to adult educational programs. At least a quarter of all potential learners want to use learning activities to get a new job, either inside or outside their present employment (CNS, 1974; Northeast New York, 1974). Interest in learning in order to get a new job may be much higher where unemployment is high, as it was in Western New York (1976) where 45 percent of past or potential learners either had participated or wanted to participate in learning activities to help them get a new job.

Potential learners who want to change jobs are interested in obtaining career advisory services. According to a recent study of career guidance and counseling needs in the United States, most adults in a career transition (those seeking work or considering a job change) are interested in undertaking vocational or professional studies, and most want career services of all types (Arbeiter, undated). These adults are particularly interested in obtaining specific information on available jobs or career options. Over 50 percent of adults in career transition in the Arbeiter study expressed high interest in services which provide lists of available jobs and facts about career fields. Similarly, in the Western New York study (1976), 52 percent of those interested in changing jobs felt that educational counseling was very important to them in preparing for a new job; no doubt

many of these individuals also would like assistance afterwards in getting a job. Among those desiring to change jobs, the least educated express the greatest interest in job counseling services (Arbeiter, undated; Western New York, 1976). Nolfi and associates (1974) argue that job referral and employment counseling are crucial for minorities, high school dropouts, and the unemployed, in order to link educational courses with jobs.

Most adults interested in changing jobs, however, do not know about agencies offering job or career help in their communities; those who are aware of such agencies are mostly familiar with traditional counseling sources such as college placement centers or state employment services (Arbeiter, undated). Moreover, as the Western New York study (1976) notes, far fewer counseling facilities are available to those learners who are not full-time students in daytime education programs.

The need for childcare services is indicated by the fact that in most studies one in six to one in four women potential learners named childcare problems as a learning barrier (CNS, 1976; California, 1975; Iowa, 1976; Northeast New York, 1974). Women between 26 and 35 years of age and nonwhite women are particularly likely to feel that childcare problems hinder their participation in learning programs (California, 1975; Colorado, 1975; Western New York, 1976). Many of these women agree that the provision of childcare services would make it easier for them to participate in learning programs (Colorado, 1975; Western New York, 1976). However, in two studies where the question of obstacles to learning participation was open-ended, smaller proportions of women named lack of childcare as a barrier to learning (Florida, 1976; Central New York, 1975). It would appear that the need for childcare is real but not as salient as the overriding problems of cost and time—or perhaps it is one of those barriers that is simply accepted because "nothing can be done about it."

The studies do not assess the specific need for orientation/school reentry programs, nor are most adults likely to recognize the utility of such services. Yet the need for orientation services is suggested by the fact that lack of confidence or a feeling they are too old prevent some potential learners—and many more of those saying they are not interested in learning—from undertaking learning. Among those who would like to engage in learning, about 2 to 12 percent lack self-confidence in their ability to learn, 2 to 17 percent feel they are "too old to go back to school," and about 6 to 11 percent feel they do not have enough energy or stamina to study. The less well-educated, nonwhites, the elderly, and the poor are more likely to feel personally incapable of returning to school (California, 1975; CNS, 1974; Colorado, 1975). Orientation programs could help overcome the negative self-images of many of these adults.

Those who *say* they are not currently interested in further learning are even more likely to have negative attitudes toward themselves. For example, nearly one-fourth of nonpotential learners in Western New York (1976) and nearly one-fourth of all respondents in Iowa (1976) (two-thirds of whom were nonpotential learners) said they were too old to learn. Those saying they are not potential learners are also more likely to list health problems as a learning barrier. But less than one-third state that lack of interest in learning is the reason they do not want to participate in a learning activity (Iowa, 1976; Western New York, 1976). Clearly, even to say one wants to participate in a learning activity requires a measure of self-confidence and a belief that learning is an appropriate activity for oneself—attitudes that many nonpotential learners do not now have. Orientation programs will not help these individuals, since only those ready to learn will attend such programs. What is needed is a way to build confidence and change attitudes about learning in the wider society; perhaps guidance services and programs at the workplace might reach some of these individuals. It is also likely that the more often one's friends and neighbors participate in learning, the more one may consider learning activities for oneself.

Other support services which appear to be needed include provisions of places where adults can study in quiet, and remediation of learning deficiencies. Of potential learners in California (1975), 14 percent said they would use an adult education center as a place to study; 12 percent said they would use it to receive training in basic skills.

MEASUREMENT OF EDUCATIONAL ACCOMPLISHMENTS

A majority of potential learners want some kind of credit or recognition for completing a learning program (CNS, 1974; Colorado, 1975; Florida, 1976; New York, 1977).[23] This may be academic credit

[23] In the Central New York study (1975) only 46 percent of potential learners wanted some kind of credit for learning.

toward a college degree or high school diploma, credit toward a skill certificate or license, or merely a certificate of satisfactory completion.

A third or fewer of the potential learners want credit toward a college degree–associate, bachelor's, or advanced (Central New York, 1975; CNS, 1974; New York, 1977).[23] Interest in college-degree credit is higher in states in which colleges are numerous and the population is relatively well educated. In Florida, 28 percent of potential learners desired college credit; and in California, 35 percent of potential learners desired college credit–the highest of any study.

Those who want degree credit are, once again, similar to those who want college-level courses and prefer a college location. In terms of modal profile, the greatest number of those seeking college credit have had some postsecondary education but have not completed a college degree, are under 35 years of age, and are in professional or sales/clerical occupations (California, 1975; Iowa, 1976).

Interest in college degree credit is most strongly related to level of education and prior exposure to college. In California, for example, 20 percent of potential learners who are high school graduates but 46 percent of those who have had one to three years of college want college-degree credit. Those with one to three years of college are most interested in baccalaureate credit. College graduates (a much smaller number than those with some college education) appear to want college credit as much as or more than do those with incomplete college education; however, as we would expect, they are primarily interested in postbaccalaureate credit (California, 1975). Level of interest in college credit drops among those who have postgraduate education, yet they still show much more interest in college credit than do high school graduates. At the same time, a larger proportion of postgraduates than of any other potential learners are not interested in any kind of credit or recognition for learning; if they do not want advanced degree credit, they generally do not care about any kind of credit (California, 1975).

Among those desiring college credit, interest in associate of arts degree credit is relatively low. In many state studies, half or a third as many potential learners wanted credit toward a two-year college degree as wanted credit toward a bachelor's degree, and in only one study, Central New York (1975), did more respondents say they wanted two-year college credit than wanted baccalaureate credit. One reason may be that the associate degree has a lower legitimacy and economic value than the older degrees.

Interest in a college degree is partly dependent upon perceived ease in attaining the degree. In a study in Northeast California (1972), adults' acknowledged interest in a college degree increased after they were offered the option of a more flexible external degree program.

Majorities or near majorities of those who want to study education, engineering, health sciences, law, or management and business skills seek college credit (CNS, 1974; Iowa, 1976). Not all of these individuals seek to pursue a college degree; many (especially those who want to study education) want college credit in order to obtain a credential, get relicensed, or obtain other certification of professional competence. On the other hand, few potential learners who choose vocational, personal, recreational, or home-and-family subject areas seek college degrees (Iowa, 1976).

Through study on their own or in non-traditional arrangements, many adults have already mastered skills or knowledge for which they want credit or other recognition. In order to gain such recognition, these adults need certification procedures that measure learning apart from, and independent of, the learning context. In studies which examined this potential service, interest in obtaining certification of prior learning appears to be relatively high among potential learners and even among those not now interested in further learning, with one-fifth to nearly one-half of all potential learners interested in some form of certification of past learning (California, 1975; Illinois, 1973). This is so, we would guess, because certification in our credentialed society is a prerequisite for many jobs. Interest in certification of past learning (or learning currently pursued in non-educational settings) appears to be especially high among current continuing education learners, adults under 50 years of age, and those with some post-secondary education, for whom such certification would hasten their completion of degree require-

[23] Desire for credit toward a college degree appears to be more widespread than is the desire for a complete degree program (California, 1975; Florida, 1976). This is because many adults want college credit units for a teaching credential, for proof to employers of skills upgrading, or just for their own satisfaction. However, the relationships between demographic characteristics or subject preferences and interest in college degrees appear to be similar to those for interest in college degree credit. The present discussion is based largely on degree-credit interest, since there is more information available on this factor.

ments (California, 1975; Iowa, 1976; Massachusetts, 1973). In Massachusetts, for example, 72 percent of continuing education students in higher education institutions said they would be interested in courses that give credit for experience outside the classroom. In the Medsker study (1975), credit for life experience was a definite attraction to students in programs offering this service.

Several ways have been developed to certify learning acquired outside of educational institutions, including use of standardized examinations, validation of student experiences, compilation of a record of past learning experiences, and competency-based measures. The form of certification most acceptable and most familiar to potential learners (and most like traditional educational practices) is the use of standardized examinations. The tremendous growth in recent years of the College-Level Examination Program and of the New York Regents External Degree Program is evidence of the demand for certification of prior learning. In Illinois (1973), 47 percent of the respondents expressed interest in credit by examination. Somewhat related is testing to obtain advanced standing in a program of studies. In the California study (1975), 18 percent of potential learners and 11 percent of all respondents were interested in this service.

Another less traditional method of certification is the validation of an individual's learning experiences, including those obtained on the job or in the military. This may be accomplished through documentation (including letters from employers and reports by the individuals) that indicate learning achievement. In California (1975), 14 percent of potential learners and 9 percent of all respondents were interested in the evaluation of noncollege experiences for credit toward a degree. In the Iowa study (1976), 14 percent of all respondents and 39 percent of current continuing education students were similarly interested.

A major new certification service is the development of a credit bank—the compilation and maintenance of a record of an individual's educational accomplishments, including learning attained in various educational institutions and perhaps in job experiences and other nonschool settings. This record permits persons who have learning experiences from scattered sources to assemble a comprehensive picture for the use of employers or institutions. The credit bank would validate these experiences by awarding or recommending credits for items in the record. In California (1975), 16 percent of potential learners and 11 percent of all respondents were interested in this service; in Iowa (1976), 10 percent of all respondents but 39 percent of current continuing education students were interested.

Finally, certification may be based on competency-based measures which assess an individual's actual performance of learned skills. Certification based on skills performance would appear to be especially desirable for adults who want to learn through on-the-job training and other less formal ways. However, use of competency-based measures for formal certification of learning remains limited, and none of the state studies examined interest in such service very carefully. Moreover, like many new counseling services, this certification option (and, in fact, any type of certification of prior or nonschool learning) is generally unknown to adults, and therefore their interest in these services may become apparent only when information about the services is more widely disseminated.

In summary, of all of the needs surveyed in state studies, the desire for credit and validation of nonclassroom learning is the most difficult to assess, primarily because very few adults are aware of the new options available to them.

There is substantial interest in certification in our credentialed society, and it is not surprising that learners interested primarily in upward job mobility should express interest in the visible payoff for education. Where the rewards of learning are largely intrinsic, as in learning for hobbies or for advanced professional expertise, there is less desire for certification than in learning activities where the primary motivation is to gain some advantage with employers. To the extent that educational credits are useful in the job market, there will no doubt continue to be interest in and some pressure for some type of formal recognition for adult learning.

4. Program Responses to Learner Needs

A national survey of non-traditional programs revealed that the great upsurge of interest on the part of colleges and universities in non-traditional education occurred around 1970. Ruyle and Geiselman (1974) estimated that by 1972 between 35 and 40 percent of American colleges and universities had launched one or more programs that were non-traditional in some respect—most frequently with respect to the type of students served. The survey revealed that only 7 percent of the programs reported were in existence prior to 1962, while 62 percent had been established since 1969-1970. It is a safe guess that in the five years since the Ruyle and Geiselman study the number of new programs and the diversity of services offered have increased.

Although the education of adults has a long history, the recent surge of interest is a worldwide phenomenon sparked in this country by the changing social mores, the shifting age distribution of the populace, and the leadership of a number of national agencies and commissions, including the Commission on Non-traditional Study (1973), the Carnegie Commission on Higher Education(1973), the American Council on Education (1972, 1974), and the Office of Education (Newman, 1971, 1973).

Despite the national visibility given to the education of adult part-time learners, the design and implementation of programs have been mostly grass-roots affairs, characterized by enormous range and diversity of program characteristics. Today, in 1977, it is virtually impossible to describe a "typical" non-traditional program for adult part-time learners, and increasingly difficult to describe the diversity in a neat scheme of classification. Yet if non-traditional programs are to be evaluated on the basis of how well they serve non-traditional students, then both programs and educational needs of students must be described adequately. Numerous attempts at describing non-traditional programs by devising typologies and classification schemes have been made, and a brief review of past typologies will be helpful here.

One of the early attempts to make conceptual sense out of the variety of programs emerging under the banner of "non-traditional" was made by Valley (1972) who described six models: administrative-facilitation model, modes-of-learning model, examination model, validation model, credits model, and complex-systems model.

The *administrative-facilitation model* is the oldest and most common non-traditional degree program. It is exemplified by the evening college. The primary departure from traditional education lies in administrative arrangements that facilitate *access* to college degrees for adult part-time learners. Courses are scheduled when working students can attend; counselors are available on weekends and evenings; registration can be handled by mail; class periods take the form of one three-hour session instead of three one-hour sessions, etc. In other words, the standard degree program is made possible and convenient for adult learners. New technologies are now adding to the convenience. Television and video- and audio-tape cassettes can deliver a standard college course into the home or place of work, and telephonic links with the class and instructor on campus can make the pursuit of a degree off campus very similar to that on

campus. Correspondence study is also a form of the administrative-facilitation model as long as it adheres to customary degree requirements.

The national survey completed for the Commission of Non-traditional Study (Ruyle & Geiselman, 1974) showed that programs that were non-traditional with respect to type of students served and location of instruction were the most common departures from traditional education, with 70 percent of the reporting institutions describing a special program as non-traditional with respect to type of student served (usually adult part-time learners) and 67 percent claiming a non-traditional location (off campus). To the extent that students are served within traditional degree requirements, the programs would be considered administrative-facilitation models in the Valley typology.

The *modes-of-learning model* is basically a modification of *curriculum*, designed to meet the learning interests of adults, but administrative arrangements for off-campus locations, scheduling, and the like are also generally made. The Bachelor of Liberal Studies degree of the University of Oklahoma would be one well-known example of the modes-of-learning model. As indicated in the name, the degree is a different degree from the traditional degree offered by the University. In most programs of this type, the curriculum tends to be interdisciplinary, or at least departing from standard academic departmental disciplines. In some programs the curriculum is developed by students and faculty.

The Commission Survey (Ruyle & Geiselman, 1974) showed that less than half of the non-traditional programs (48 percent) claimed non-traditionalism with respect to content, and our familiarity with today's programs would indicate that modifying the curriculum of degree programs to meet special interests of adults is not a common procedure. Modifications in content are more frequently handled through noncredit offerings than through the complex design of an integrated special degree program.

The *examination model* is conceptually simple. If students can demonstrate on a series of examinations that they have knowledge comparable to that expected of college graduates, they will be granted a degree on the basis of their performance on examinations. What is required is that a delegated degree-granting authority establish the knowledge that is expected of college graduates and offer a credible set of examinations to measure such knowledge. The University of London has been offering an external degree since 1858. The New York Regents degree is the best-known examination model in this country. It permits adults to earn associate and bachelor's degrees solely on the basis of examinations. In 1975, however, only 17 percent earned an AA on the basis of examinations alone, but 70 percent earned some credit by examination (Medsker et al., 1975).

The *validation model* is similar in concept to the examination model, but it permits a wider array of measures to determine the knowledge or competencies of the candidate. Students assemble a record of educational accomplishments, including courses taken elsewhere and noncourse learning accumulated through independent study, work experiences, and the like. Competencies and knowledge might also be demonstrated on oral, performance, or written examinations. When students have accumulated learning experiences and competencies adding up to some defined degree, their learning is "validated" and the degree granted

The *credits model*, like the examination and validation models, is concerned with granting degree recognition for noncollegiate learning. In this case, an agency not offering instruction but empowered to grant degrees would vouch for the quality of credits accumulated elsewhere. The Office on Educational Credit of the American Council on Education is the closest approximation to a credits model in the United States. Although not a degree-granting agency, it recommends credit to degree-granting institutions. The Office sends a team of experts to examine courses offered by government, industry, unions, military, and the like, and publishes a guide of recommended credit.

The *complex-systems model* is just what the name implies, a combination of other models. It would include some of today's best-known non-traditional degree programs—Empire State College and Metropolitan State University, to cite but two. In the years since 1971, many institutions—traditional as well as non-traditional—have used concepts described in the Valley models as an eclectic approach to non-traditional programming. Most institutions, for example, make some administrative arrangements, usually flexible scheduling and off-campus locations to facilitate the access of working students to degree programs. Many give recognition for some learning done elsewhere—other colleges, military courses, courses recommended by the ACE Office on Educational Credit. And a substantial majority of traditional, as well as non-traditional, colleges and universities grant at least limited amounts of credit by examination. In other

words, most non-traditional programs today probably fall into Valley's complex systems model.

Houle (1973) developed a three-model historical typology of external degrees that can be likened to the Valley models. Historically, the first external degree was the *extension degree* which was devised to facilitate the access of working adults to degree programs through administrative arrangements. As such it is similar to Valley's administrative-facilitation model and is epitomized by evening and extension colleges. The *adult degree* was then devised to avoid "treating experienced men and women learners as though they were still teen-agers" (Houle, 1973, p. 9). The curriculum, methods, and administrative arrangements were developed with the concerns and lifestyles of mature students in mind. Houle's adult degree may be likened to Valley's modes-of-learning model; the University of Oklahoma's Bachelor of Liberal Studies serves as a good example of this type of response to the special needs of non-traditional learners. Finally, Houle tentatively groups recent (since 1970) structural and procedural changes of non-traditional programs under the term *assessment degrees*. Assessment degrees redefine the measures of learning and encompass Valley's examination, validation, and credits models.

One further typology should serve to illustrate the evolving attempts to describe or type non-traditional degree programs. Studying 16 extended degree programs in depth, Medsker et al. (1975) arrived at a four-model classification scheme. The *extended-campus approach* is typified by evening and extension programs and is comparable to Valley's administrative-facilitation model and Houle's extension degree. The *liberal studies/adult-degree approach* is comparable to the modes-of-learning and adult degree models already discussed. It goes beyond administrative facilitation to devise special curricula to meet the interests of adult learners. The *individualized study approach* goes beyond the adult degree approach in recognizing the great diversity of adult backgrounds and goals. It is characterized by some of the well-known new programs such as Empire State and the Community College of Vermont that emphasize student-initiated learning contracts and the use of community resources. Finally, the *degree-by-examination approach* was included in the Medsker typology to accommodate the New York Regents External Degree program. It is directly comparable to Valley's examination model.

While there is considerable comparability across these typologies, their major contribution lies more in their presentation of a picture of the historical evolution of a concept than in their usefulness as classification schemes for today's non-traditional degree programs. The most recent typology, the four-model scheme developed in the Medsker study, shows quite clearly the evolutionary phases of development in non-traditional education—from administrative arrangements only, to adding special curricula for adults in general, to specialized arrangements and curricula for individuals, to the idea of measuring learning wherever or whenever it occurs.

While Houle looks at the evolution in an historical context, it can also be looked at as a continuum of departure from traditional degrees or as increasing accommodation to the needs of individual learners. Educational programs for adults have moved ever closer to the definition of non-traditional study proposed by the Commission on Non-Traditional Study (1973). Non-traditional education, said the Commission,

> Puts the student first and the institution second, concentrates more on the former's need than the latter's convenience, encourages diversity of individual opportunity rather than uniform prescription, and deemphasizes time, space, and even course requirements in favor of competence and, where applicable, performance. (p. xv)

Such a concept calls for starting with student needs and *then* creating programs to respond to such needs. Recently, non-traditional programs have evolved in the direction of putting student needs first and institutional needs second, in moving toward increasingly individualized programs, and in deemphasizing procedural and administrative concerns in favor of learning concerns.

Program responses, however, have now reached the point where change and diversity are so great that existing typologies fail to address today's needs. In their study of 16 extended degree programs, the Medsker team noted with frustration the problems of defining clear non-overlapping categories. Indeed, on a continuum of program responsiveness to learner needs, the third Medsker category of individualized study can be said to include the administrative conveniences of the first category, *and* the curricular responsiveness of the second category. While the typologies that have been developed do convey an evolving educational philosophy—dominated by the

motive to respond directly to learner needs—they do not provide adequate vehicles for *describing* programs. Recent "types" tend to incorporate all or most of the conveniences from earlier types, thus maximizing category overlap for recent models of non-traditional education. We believe that the most fruitful approach at the present time is to develop a program component profile that will accommodate constant change and the growing diversity in program design.

We propose to do this through devising a classification that will permit the description of any given program as a *profile of program components.* Profiles may be simple, unidimensional programs such as the typical evening college which responds to adults' needs for flexible scheduling through administrative facilitation, or programs may show multidimensional profiles that use components from administrative, curricular, and assessment categories of today's typologies.

We have drawn from three resources in developing the Program Response Profile presented in Chart A. First, we owe a debt of gratitude to the conceptualizers of non-traditional progarms who preceded us. Their analyses provide an inclusive framework which defines the parameters of non-traditional education. Second, we have drawn heavily from the innovative program features developed by grassroots practitioners to meet the particular needs of their clientele. Third, we have used the cataloging and taxonomy efforts of researchers who have refined classification schemes through factor analysis and other analytical treatments. The systematic analyses reported in the literature, however, help only in refining *sub*-categories of our program responses. To our knowledge, no one has yet attempted to apply factor analysis to the program components of the total spectrum of non-traditional programs to see if reasonably independent dimensions emerge, but it is an idea whose time may have arrived. Nevertheless, we found the work of taxonomists of considerable value in constructing subcategories for our profile of program responses. The motivations of adults in undertaking further education, for example, have been extensively studied over the years (as we noted earlier), and that background forms the basis for our subcategories of student motivations and curricular options. Likewise, the National Center for Higher Education Management Systems (NCHEMS) has done considerable work on standardizing the descriptive terms used in adult education. We could not find nor devise any more useful or inclusive set of *instructional* methods than that worked out by Collier and Roberts (1976).

The major categories (Roman numerals) of the program responses presented in Chart A are familiar as common categories used in the major typologies of the past. Certainly Category I, making *administrative accommodations* with respect to convenient schedules and locations, is a hallmark of a majority of non-traditional programs. It is so basic that the term "time-free, space-free learning" is frequently used as a synonym for non-traditional education.

Category II, *teaching/learning considerations,* makes provision for describing the instructional methods and delivery mechanisms appropriate to the backgrounds and motivations of adult learners. And it also includes curricular innovations and modifications designed for adult learners. Included in Category II would be Houle's and Medsker's adult degrees and Valley's modes-of-learning models, all of which represent curricular accommodations to the needs of adults. The individualized study approach identified by the Medsker team has both curricular and teaching methods components and, as such, it too would draw heavily from the components of Category II. It should be noted that the individualized study approach, for example, also draws components from Category I. It *necessarily* incorporates administrative accommodations. The advantage of the component approach to describing programs is that multidimensional programs (which are *most* programs today) are best described by using non-traditional components from categories I, II, III, and IV in Chart A.

Category III, *student services,* represents a major characteristic of non-traditional programs which has not been given explicit recognition in past typologies, but continues to grow in importance. Student services, such as financial aid, counseling, and orientation, have been recognized as important features in traditional education, but somehow have not been highlighted until quite recently in non-traditional education. Some of the newest forms of noninstructional services for adults are freestanding, not connected to institutional programs. Others, however, are integral parts of the programs. An example of a freestanding service is the educational brokerage that helps put learners in touch with a wide range of learning opportunities. An example of a student service that is an integral part of a program is the orientation function for reentry women. Whether freestanding or integrated into a total program, the use of Category III permits us to describe nontraditional responses to the noninstructional needs of part-time learners.

Category IV represents the assessment component which has been recognized in previous typologies. Many programs today utilize components from all three of the Valley assessment models–examination, validation, and credits. And most non-traditional programs today include one or more new approaches to assessment.

The purpose of the component approach presented here is more to *describe* than to classify programs. For evaluation purposes we are not so much interested in concluding that a given program is primarily Type I with overtones of Types II and III[24] as we are in obtaining an accurate description of the program and ultimately in determining which parts of these complex programs are effective for which students. Conceptually, the match between the needs profile of a group of students and the components profile of programs should correspond for maximum effectiveness. In fact, the extreme concern with "market surveys" these days is an attempt to match program offerings and services to student needs and interests. Where a program can identify a target group of learners with relatively homogeneous needs profiles, the range of components offered can be fairly limited. At the other end of the continuum of program complexity might be the very large programs that offer a maximum number of alternatives in the effort to meet the broad spectrum of learner needs.

The program components which appear in Chart A have been devised by grassroots practitioners, by state agencies, and by national agencies and foundations in an effort to meet the educational needs of adult part-time learners. They appear to be directly responsive to the needs of non-traditional learners as those needs have been identified and verified by the needs assessments described in Section III of this report. The descriptions and definitions which follow are not intended to be exhaustive in portraying *all* of the responses devised to meet student needs. Rather we have concentrated on communicating the ideas behind the program responses, by presenting a few examples. Under category C-1, for example, we have indicated that credit-by-examination is one non-traditional measure of educational accomplishment. But the variety of examinations that could be used is very great indeed. It would serve no purpose to describe the range of possibilities. What we are trying to illustrate is the mechanism that has been used to respond to the needs of non-traditional learners for new measures of educational accomplishment. The categories in Chart A have been "tried for fit" against a sample of today's programs for adult part-time learners. We believe that almost any program developed for adult part-time learners can be described by using the categories of Chart A to compile a *profile* of response components. The section which follows will provide a more thorough definition and understanding of the descriptive categories of Chart A.

ADMINISTRATIVE ACCOMMODATIONS

Scheduling

The oldest and most common administrative arrangement to accommodate the needs of working students is non-traditional scheduling. In the Commission study of non-traditional programs (Ruyle & Geiselman, 1976) 88 percent of the programs offered schedules that departed in some manner from traditional daytime classes. *All* of the extended degree programs studied by the Medsker team (1975) offered scheduling modifications.

It is not difficult to develop a continuum of scheduling flexibility ranging from very slight concessions to completely student-determined schedules. Major checkpoints on a continuum of departure from traditional scheduling might look something like this:

1. Hour-long classes meeting three times per week in the evening.
2. One three-hour class meeting once a week in the evening.
3. Block scheduling on weekends or several times a year.
4. TV or radio classes offered on regular schedules but repeated or available on tape.
5. Self-paced learning within a standard semester or term.
6. Open-entry/open-exit schedules in which students may start and complete a unit of study at their convenience.

In variations 1, 2, and 3, the student must be present at a prescheduled time, but the times are geared to the needs of working students. Option 4 offers the flexibility of providing for circumstances in which a student can "catch up" with a missed session. Option 5 requires no attendance at scheduled classes, but the student must complete the work within a prescribed period of time, usually a semester. The semester-bound form of self-pacing is as prevalent in traditional daytime programs as it is in non-tradi-

[24] There are almost no "pure" types left today.

tional programs, maybe more so, because it provides for differential *rates* of learning as well as offering scheduling flexibility. Self-paced learning, it should be noted, is not necessarily flexible with respect to anything except pacing. Programmed learning and Keller-plan courses (see Cross, 1976), for example, are highly prescribed with respect to content and method. Independent study projects, on the other hand, are largely student-determined with respect to content and method as well as scheduling. Still, many, if not most, independent study projects are semester-bound.

Option 6, open-entry, open-exit schedules offer maximum flexibility as far as scheduling is concerned. The student may start and conclude the work at his or her convenience. Demonstration of completion of the work may be determined by assessing competencies or by the satisfactory completion of various tasks or obligations.

In presenting schedules along a continuum of flexibility, there is no intention to imply that maximum scheduling flexibility is necessarily "better than" minimum flexibility. Many students, especially the less well-educated, prefer a schedule that imposes a certain amount of discipline upon them. If self-discipline is felt to be a problem, Option 1 may be the most satisfactory scheduling option, because it offers the most frequent externally imposed checkpoints. For the learner who has plenty of self-discipline but a cyclical or unusual schedule of other responsibilities, Option 6 may be the best answer.

While scheduling can be usefully analyzed as a separate dimension on non-traditional programming, it obviously interacts with locations, methods, and content. Scheduling Options 5 and 6, for example, are not possible in a standard lecture/discussion format, and Option 1 would be impractical in certain types of vocational or crafts courses where longer periods of time are needed to complete laboratory work.

Alternative scheduling possibilities constitute an important dimension of non-traditional programming. The Medsker (1975) study found that a majority of students already participating in the extended degree programs studied were satisfied with the scheduling flexibility offered in their program. Our synthesis of data from state and national studies (pp. 26-29) shows that up to 25 percent of potential learners still check scheduling problems as a barrier to their continuing education. Furthermore, well-educated, highly motivated learners are still citing scheduling problems as a barrier to continuing education. Since many of the more academically oriented subjects do adhere to more traditional daytime, semester-bound schedules, the scheduling complaints of well-educated adults who are more likely than other adults to be interested in "academic" learning, may be justified. Nevertheless, scheduling flexibilities are increasingly common in both traditional and non-traditional education. The use of self-paced learning modules is the most rapidly growing innovation in traditional education (see Cross, 1976), and self-pacing and scheduling flexibilities have a very bright future in non-traditional study as well.

Locations

Another hallmark of non-traditional education is represented by off-campus locations. Like scheduling, flexibilities with respect to locations are administrative arrangements made to make access possible or easier for adult learners. While scheduling is a critical variable for adults with home and job responsibilities, location is critical for a somewhat different set of adult learners–the handicapped, elderly, geographically isolated, prisoners, parents of small children, those without transportation, and the like. The fairly simple variable of physical accessibility to learning opportunities has a demonstrated effect upon educational participation in both traditional and non-traditional education (Bashaw, 1965; Bishop & Van Dyk, 1977; Koos, 1944; Trent & Medsker, 1965; Willingham, 1970). Certainly, recommendations and the trends in recent years have been to take education to students in a wide variety of forms–free-access colleges, extension classes, community learning centers, on-the-job training, colleges without walls, media-delivered education, etc. Like scheduling, options with respect to location could be put on a continuum of flexibility, ranging from presence required at a given place to completely student-determined locations.

There are two dimensions to consider in evaluating how well non-traditional programs are responding to the needs for alternate locations for non-traditional students. One dimension has to do with physical *accessibility*, the other with *flexibility*. Most of the responsiveness of non-traditional education to the needs of adult part-time learners has centered around off-campus locations such as extension classes, regional learning centers, media-delivered education, and the like. The problem addressed is accessibility and convenience. Taking the classroom to the student rather than vice versa is a response to the special needs of location-bound learners. But the physical

convenience of learning locales also opens up new opportunities to people who could, with varying degrees of difficulty, make it to a college campus, but who probably wouldn't–hence the popularity of downtown learning centers, work sites, home-delivered education, courses on commuter trains, etc. Some of these locales are convenient but inflexible, i.e., the learner must present herself or himself physically at the place where education is being delivered. Other non-traditional locations may be determined by the learner. The old-fashioned, highly portable textbook remains one of the most flexible forms of putting students in touch with learning resources–which is what location is all about.

Choices with respect to location interact strongly with content and method. Indeed, the interaction of location with content is probably much greater than is generally recognized by traditional education's adherence to the classroom as the standard location for all kinds of learning. On-site learning, hands-on learning, and experiential learning all refer to *qualities* of the learning experience that should be considered in evaluating the component of "location." There are even instances where "convenient" locations should probably be given low ratings. For example, if an art appreciation course is taught completely in the classroom of an urban college (because everyone is there anyway) when a fine museum exists in the city, an evaluation should probably question whether the program is utilizing the best educational resources available.

Location is an important component of non-traditional education, having an impact on everything from opportunity to the quality of learning. For descriptive purposes, learning locations can be described as on-campus, off-campus (community, work site, home, or other locale), or student determined (Chart A). In evaluating the responsiveness of alternate locations to learner needs, however, the effectiveness of the utilization of learning resources should be considered as well as the dimension of convenience and accessibility for the learner.

TEACHING/LEARNING CONSIDERATIONS

Methods and Delivery Mechanisms

In 1976 the National Center for Higher Education Management Systems (NCHEMS) and an advisory group representing the Coalition of Adult Education Organization (CAEO) undertook a joint project to develop a framework for describing adult education and higher education programs within the context of postsecondary education (Collier & Roberts, 1976). One of the descriptive dimensions for which they developed a taxonomy is "delivery mechanisms." This category describes "those methods employed in delivering educational programs to the learner" (p. 51). The work of NCHEMS/CAEO provides a solution to our quest for a scheme for describing the methods used in non-traditional programs. The following categories, definitions, and examples are taken directly from Collier and Roberts (pp. 52-54):

1. *Distance Teaching/Independent Study*
   Those methods in which the learner is isolated from the learning situation by reasons of time, distance, etc. It typically involves a systematic program of study which is conducted primarily through the use of written materials (although mass media devices may also be used). There is generally limited personal contact between the teacher/agent and the learners, with most interaction taking place through written communication. The instruction tends to be individualized rather than focusing on a group of learners and normally enables students to progress at their own pace.
   Examples: Correspondence Schools
   Home Study

2. *Instructional Materials/Devices-Based Instruction*
   Those methods in which there is no direct personal contact on the part of the learner with any teacher/agent. The learner utilizes electronic, mechanical, printed, or multimedia materials/devices which have been specifically prepared to provide instruction, and the amount of interaction of any kind that takes place is determined by the capabilities of the materials or devices utilized. The instruction tends to be individualized rather than focusing on a group of learners and normally enables students to progress at their own pace.
   Examples: Computer Assisted Instruction
   Programmed Instruction
   Telelecture
   Auto-Tutorials
   Audio-Video Cassettes

3. *Directed Individual Study*
   Those methods in which the student learns a set of skills or gains knowledge in a *one-to-one situation* from a teacher/agent. In some cases, the teacher/agent actually teaches and in other cases the learning process is facilitated by the teacher/agent through direction or supervision. This method involves direct personal contact and a high degree of interaction between the learner and the teacher.

Examples: Library Directed Study Programs
Student-Centered Curriculum Study
Private Instruction (languages, piano lessons)
Tutorial Learning

4. *Directed Experiential Learning*

Those methods which provide the learner an opportunity to acquire or apply previously acquired knowledge and skills in a supervised situation that approximates or duplicates the conditions under which the knowledge/skills will be used. The instruction is typically individualized with a high degree of interaction between the student and the supervisor.

Examples: Apprenticeship
On-the-Job Training
Work Experience Programs
Performance Based Education
Hospital Internship
Practice Teaching
Practicums

5. *Classroom*

Those methods which utilize a sequence of learning experiences arranged in a systematic order of predetermined duration, generally structured around a limited segment of a particular body of knowledge. The teacher/agent is charged specifically with the general direction, organization, and control of the learning experience. Classroom instruction generally focuses on the instructional needs of a group rather than of individuals, and interaction is provided for between the student(s) and/or the teacher/agent.

6. *Seminar/Workshop*

Those methods in which the responsibility for learning is shared by the group members and the teacher/agent(s) or in which the group applies prior knowledge in addressing a problem or issue. This method generally involves a group of persons who meet, under the direction of one or more teacher/agent(s), to discuss topics of mutual interest and concern. This method includes Discussion Groups. The duration of the activity will vary with the nature of the content and purposes of the group.

Examples: Topic-related Seminars
Forums
Task-oriented Workshops

7. *Laboratory*

Those methods in which knowledge is acquired and/or applied in a learning activity that is an *artificial construct* of reality. Laboratory instruction generally focuses on the group rather than individuals and allowance is made for interaction between the student and the teacher/agent.

Examples: Language Laboratories
Art Studio/Laboratories
Science Laboratories

8. *Assembly*

Those methods which involve a group of individuals too large to permit effective face-to-face interaction. Assemblies are generally specifically structured learning situations which involve a single independent or series of independent events in which there is limited participation by the learner, and the major control of the learning situation is held by the teacher/agent.

Examples: Lectures
Community Gatherings

9. *Mass Media Instruction*

Those methods in which instruction is provided for a general, nontargeted audience through *mass media.* Major control of the learning experience is held by the teacher/agent, and there is no interaction intended or allowed for.

Examples: Educational Television Networks (unless part of a correspondence course)
Newspaper courses (unless part of a correspondence course)

10. *Nondirected Experiential Learning*

Those situations in which the learner acquires knowledge or skills through *independent* experiences. There is no formal interaction between the learner and a teacher/agent, but interaction does take place between the learner and individuals encountered in the education experience, as well as between the learner and the actual surrounding (i.e., viewers of original art work in galleries and displays in museums).

Examples: Cultural Exchange Programs
Learning Through Independent Experiences
Do-It-Yourself Learning

While not all of the methods defined by NCHEMS/CAEO (based upon adaptation from Verner, 1962) are used in *degree* programs, most non-traditional programs offer a variety of methods, and some programs give students some experience with all ten methods listed above.

One of the findings of the Medsker (1975) team, for example, was that

> In all programs . . . students reported having experienced a remarkably wide range of different learning modes. This suggests that while in any one program there may be special empha-

> sis on preferred modes of instruction, a number of other modes of instruction are available, and students do take advantage of them. (p. 70)

As a matter of fact, one of the most dramatic methods innovations to emerge from the non-traditional movement is the learning contract which can, and often does, utilize all of the methods described above. Because the learning contract is so important to the non-traditional philosophy, a brief illustration of a learning contract may be helpful as an adjunct to the NCHEMS/CAEO methods taxonomy. The student entering Metropolitan State University, to cite one model, develops with the help of a faculty advisor an Educational Pact setting forth his or her educational goals, the competencies to be mastered, the learning strategies and the evaluation methods that will be used to determine the attainment of the goals. There is no formal curriculum, but students are encouraged to develop competencies in five areas: basic learning and communication, civic involvement, vocation and career, leisure and recreation, and personal growth and self-assessment. The learning contract is really an individually tailored non-traditional program. As such, it, like any other non-traditional program, may be described by a profile consisting of components from the methods, content, and assessment categories.

Content/Curricular Options

In 1972 fewer than half (48 percent) of the college and university programs described as "non-traditional" departed from traditional curricula (Ruyle and Geiselman, 1974). But the most visible and dramatic models of non-traditional education are distinctive with respect to the content or curriculum offered. Many people associate the names of Empire State College, Metropolitan State University, University Without Walls, University of Oklahoma, and of course the British Open University with the non-traditional movement, whereas evening colleges, community colleges and other programs that offer traditional subjects (sometimes in very non-traditional ways), to non-traditional students are frequently overlooked as "non-traditional" programs.

Despite the fact that degree programs adjusting the curriculum to the special interests of adults serve only a handful of the non-traditional students in the country, they have been exceptionally influential in the leadership of the non-traditional movement. Indeed Houle's historical typology of non-traditional programs (1973) is characterized largely by curricular changes and flexibility. From a traditional curriculum based in the academic disciplines (extension degree), adult education moved to a special curriculum designed for adults (adult degree) and then on to the assessment degree, which frequently, but not always, permits students to tailor the curriculum to their individualistic needs.

The philosophy of non-traditional education emphasizes gearing education to the needs and goals of learners. As we have seen in Section III, the content interests of learners are extraordinarily diverse. Yet our study of existing non-traditional programs indicates that curricular approaches can be adequately described by a fairly tight typology. The major differentiation occurs over the matter of who designs and prescribes the curriculum, and this ranges from student-determined (with the guidance and approval of faculty) to sponsor or college prescribed.

Student-determined curricula are usually designated a learning contract, a degree plan, or some other terminology that indicates an organized educational plan that generally includes learner goals, learning strategies and resources, knowledge or competencies, time schedule, and assessment measures. Learning contracts may be highly individualized, and the content agreed upon may depart greatly from the usual discipline-based curriculum. On the other hand, a student may elect to design a rather traditional sequence of subject matter courses, using the contract largely to attain flexibility in delivery methods or administrative arrangements.

Most non-traditional programs offer a pre-set curriculum that is defined or prescribed by the sponsor. It may be a traditional academic curriculum with standard breadth and depth requirements or a prescribed occupational program, or it may be an interdisciplinary course of study geared to the general education interests of adults.

The one possible model that lies between student-determined and sponsor-determined curricula is the curriculum that is jointly developed by students and faculty. From time to time some small experimental programs have worked out a curricular plan which reflects group interests and which faculty and students then pursue, usually for a year. To our knowledge this approach represents such a small fringe of programs that a separate category is not justified to describe today's curricular models. Furthermore one can argue that a group-designed program is sponsor-determined whether the defining group consists of all faculty or faculty and students.

Once decided upon, all students follow essentially the prescribed model.

Matching existing non-traditional programs against the content/curricular typology, we find that all of the programs can be described using the following categories.

1. Primarily student-determined, i.e., learning contract.
2. Primarily sponsor-determined
   a. Academic
   b. Adult liberal learning
   c. Occupational/professional
   d. Other.

STUDENT SERVICES

The need for non-instructional services to facilitate student access to educational opportunity has emerged in recent years as a major component in non-traditional education. A number of states are considering the desirability of establishing statewide information, counseling and referral services; private and consortium brokerage services are springing up spontaneously; numerous proposals for entitlement funding for lifelong learning are hotly debated in Washington; competition for adult learners is sufficiently intense that new attention is given at the program level to recruitment, financial aid, orientation programs and a host of other special services that will help adults make good use of the opportunities available.

As we have seen from the analysis of learner needs described in Section III of this report, non-instructional services are frequently as important to adult learners as the more instructionally oriented components included in our discussion of content and methods. Lack of funds, lack of information about available opportunities, and lack of self-confidence in returning to college are all mentioned by substantial numbers of potential learners as barriers to their continued education. The program responses to these needs are categorized under the headings of financial assistance, brokerage and counseling services, and orientation programs.

Financial Assistance

The response of non-traditional programs to the financial needs of students has lagged far behind responsiveness to other student needs. Indeed it is probably fair to say that not only is there a failure to respond in non-traditional ways to the financial needs of adult learners, but traditional financial aid sources have been slow to respond to part-time learners who constitute the "new majority" in higher education.

The special report of the ACE Committee on the Financing of Higher Education for Adult Students (1974) concluded that,

> Regardless of family income, [adult] part-time students on the whole are massively discriminated against in federal and state student and institutional aid programs, social security survivors' benefits, institutional tuition rates and financial aid programs, and income tax requirements. (p. 3)

As recently as 1973, only four state needs-based student aid programs offered eligibility to part-time students. In 1975-76, part-time students received 17 percent of state student aid dollars, and by 1976-77, an estimated 25 percent of aid funds were awarded to part-time students (ACE, 1974; Winkler, 1976). There is now a general awakening to the financial needs of part-time students whether in traditional or non-traditional programs. And the whole question of financial assistance for adult learners has become a hotly-debated and highly controversial issue, especially in state and federal government.

It is far beyond the scope of this paper to present the numerous proposals and analyses that have been offered within the last year or so with respect to financial assistance for adult part-time learners. Good descriptions and rationales of some of the foremost proposals for Federal entitlements can be found in Report Number Four, edited by Kurland (1977) and issued in March 1977 by the Education and Work Group of NIE under the title *Entitlement Papers.*

Our emphasis in this paper is on the responses of non-traditional programs, and in the case of financial aid, there has not been much response at the program level to the special financial needs of adults. Indeed the irony of the financial component of non-traditional education is that many institutions launching programs to attract non-traditional learners did so more in the anticipation that adult students would provide institutions with financial assistance than vice versa. That expectation is, in part at least, responsible for the "marketing" philosophy in which the increasingly competitive providers of educational services are eager to be responsive to the needs and interests of potential "buyers." There is some evidence that adults are a plus in the financing of education. The Medsker team (1975) found that student tuition and fees in non-traditional programs amounted to 75

percent of the costs of education versus about 28 percent for traditional programs.

There is, of course, one advantage to the relatively small public investment in adult education, and that is that the providers of adult education have had to be more responsive to the needs of their clients than is the case for traditional education. But the bad news is that as continuing education becomes both more popular and more necessary for adult learners, the educational gap between the "haves" and the "have nots" will continue to grow in the absence of public financial intervention. The data are quite clear that adult learning programs are serving the privileged members of society out of proportion to their numbers in the population.

The concept that is beginning to surface is that financial aid for adult students requires something quite different from a simple expansion of traditional financial assistance. The entitlement plans presently under discussion emphasize the necessity of centering the financial support on students rather than institutions, thus enabling adults to make their own decisions about where they wish to pursue learning and where they wish to get the information and guidance that will enable them to make intelligent decisions about the use of the opportunities available. The diversity and decentralization of both instructional and support services for adults is another factor that necessitates a rethinking of present financial aid programs.

The issue of financial aid is in great flux right now. Indeed it may not be too harsh a judgement to say that financial aid programs, whether traditional or non-traditional, are in general disarray. Francis Keppel, chairman of the National Task Force on Student Aid Problems was quoted in the Chronicle for Higher Education (April 1, 1975) saying that "as the volume and variety of needs have increased, the system has proliferated into a luxurient tangle of programs, policies, and procedures that has become all but impenetrable even to professional aid administrators, let alone to students, the systems' intended beneficiaries."

For descriptive purposes we may have to content ourselves with a purely temporary way to deal with program responses to the financial needs of students. Today's models are derived from piecemeal expansions of traditional financial aid programs, and while these approaches to the problem are not satisfactory, the fact is that the response of non-traditional programs to the needs of adult part-time learners for financial assistance can be adequately described by the following categories:

1. Traditional financial aid including loans, grants, and scholarships.
2. Employer contributions which include union-negotiated benefits, released time, tuition rebates, etc.
3. Employer sponsored programs which are almost inevitably job-related and which may involve a contract with an educational agency.
4. Free tuition which is the model most often used by public community colleges which serve growing numbers of degree-oriented adult learners.

Brokerage and Counseling Services

The availability and adequacy of counseling and information services has a powerful impact on access to educational opportunity. When traditional colleges, especially community colleges, revised their instructional schedules to meet the demands for evening and weekend classes on the part of non-traditional learners, they usually staffed counseling offices during evening and weekend hours as well. For many public colleges today, the hours of operation are given as 7:00 a.m. to 10:00 p.m. and that means that both instructional and counseling services are available whenever the college is "open." This is basically an "administrative arrangements" model. It makes traditional services available at times and places that are convenient for adult part-time students. But questions are now arising as to whether the simple expansion of traditional services is adequate to the needs of adults.

The foremost group taking the position that totally new models of support services are needed for non-traditional learners is the National Center for Education Brokering established in 1976. The Center acts as a "brokers' broker" with a mission to provide a central clearinghouse to coordinate communication among agencies involved in advising adults and to "catalyze efforts to further popularize and gain support for the brokering idea." (National Center for Educational Brokering, Vol. 1, No. 1, Jan. 1976.)

"Educational brokerages are best described as go-betweens or intermediaries which serve to help adult students find their way into and through the experience of postsecondary education" (Heffernan, Macy, and Vickers, 1976, p. v). The functions of the educational broker and the client objectives which they serve are described by Heffernan, Macy, and Vickers (1976, p. 3) as follows:

- Define goals for personal and working lives.

The broker's function is to facilitate personal assessment, value clarification, occupational exploration, and long-term planning by the client. This requires the broker to have capabilities for counseling and for evaluating career alternatives.

- Set objectives for further education.

The broker's function is to facilitate a choice by the client of the competencies and/or the certification (diploma, degree, license) to be obtained. To do this, the broker utilizes assessment techniques and information on additional skills and credentials needed to achieve clients' personal goals. Also investigated is whether formal learning experiences or other kinds of learning experiences are most appropriate.

- Select learning experiences to achieve competencies and certification.

The broker's function is to facilitate a selection by the client of specific learning activities. The broker needs information on all programs in local secondary and higher educational institutions, proprietary occupational institutions, manpower agencies, social and cultural agencies, business and industry training centers, and, often, learning resources represented by people in the community itself.

- Gain access to appropriate learning opportunities.

The broker's function is to facilitate the client's working through the procedures for admission and financial aid, and securing equitable recognition for prior learning. This requires that the broker be acquainted with key institutional personnel and procedures, be able to help clients present evidence of prior learning, and serve as advocate for them with individual institutions.

Obviously the functions of the educational broker are much broader than those of the traditional campus-based counseling service. Furthermore, the new brokerage idea is strongly concerned with the access issues of education which would appear to be a vital function for re-entry adults who, as we have seen, often do not know where to turn for information about educational opportunities or for advice in negotiating their entry into the increasingly diverse network of educational providers.

The services that have appeared within the past several years in response to the guidance needs of non-traditional learners may be on or off-campus and might be described and catalogued under the following headings:

1. Information about education and career opportunities.
2. Assessment of student interests and abilities.
3. Assistance in matching learner desires with educational opportunities.
4. Recruitment of underserved populations through outreach.
5. Advocacy to help students gain access to specific educational programs or courses.

Orientation Programs

Freshman orientation has long been a service carried out on traditional college campuses to orient entering students to life at the college. Typically, orientation has lasted anywhere from several hours to several days just prior to the opening of classes. Major purposes have been 1) to provide information about student services, the use of the library, class schedules, locations of buildings, etc. 2) to provide social opportunities for getting acquainted with other students, 3) to administer placement examinations, and 4) to introduce students to the educational missions and philosophy of the college. The orientation of re-entry adults would seem to call for a reconceptualization of the purposes and functions of orientation programs.

Unlike the student services of financial aid and brokering, the leadership for rethinking the role of orientation in non-traditional education has come, not from external agencies and groups, but from on-the-line program administrators rising to the needs of their students, many of whom have been out of the educational mainstream for years.

Looking across today's orientation programs, it seems possible to identify three major purposes: 1) to assist students in re-establishing possibly "rusty" academic skills 2) to assist students in developing positive perceptions of themselves as learners 3) to help students develop an educational plan.

Some examples of existing orientation programs may be helpful here. The College of Continuing Education at Roosevelt University conducts a Proseminar which is a six-credit hour course geared mainly to orienting or re-orienting inner city students to the world of academic study. Students work in simulated educational situations to experience their problems in returning to study and academic learning. The problems are both cognitive (basic communication skills) and affective (attitudes about themselves as learners).

Another type of orientation emphasis that has become popular with the return of women to the

classroom and the labor market is the confidence-building, consciousness-raising workshops designed to demonstrate to re-entry women that, despite some years of absence from the classroom, they are capable and competent learners.

Metropolitan State University in Minnesota conducts an orientation program designed to acquaint entering students with the philosophy of the college which emphasizes self-direction in learning. The task in this six week course is for each student to draft a Degree Plan which sets forth learning goals, the strategies for reaching those goals, methods used to assess competencies, and educational content.

These brief sketches of a few non-traditional orientation plans illustrate the general movement in non-traditional orientation, which is to provide the re-entry student with the skills and attitudes to accomplish learning goals in a particular program. While programs may emphasize one or another of the orientation components, all of the programs we have examined may be described using three basic functions:

1. to establish or re-establish academic skills
2. to create positive learner attitudes
3. to develop educational plans

MEASUREMENT OF EDUCATIONAL ACCOMPLISHMENTS

The newest and probably most controversial component in non-traditional programs has to do with the measurement of educational accomplishments. Whereas traditional degree certification depends heavily on *process* measures, i.e., documentation of courses taken, credit hours accumulated, residency requirements fulfilled; non-traditional programs are beginning to emphasize *outcome* measures, i.e., competencies achieved, skills learned, knowledge demonstrated.

The arguments for the use of outcome measures are similar, whether one is talking about traditional or non-traditional programs, but the pressure for alternative measures is much greater when adults are the students. In the first place, adults come to college with greater and more diverse backgrounds of learning than younger students, and in the second place, it may be necessary or desirable for adults to collect their learning experiences from a diversity of sponsors—employers, extension classes, work experience, community agencies, etc. Some form of collecting, assessing, and certifying learning from a variety of sources is responsive to the needs of many "self-educated" adults.

A program or institution can hardly be classified as traditional or non-traditional anymore on the basis of its credit-granting priorities. The idea of granting credit for off-campus learning has spread rapidly over the last decade so that it pervades traditional as well as non-traditional programs. The difference probably lies in the extent to which the philospophy of granting credit for what the student knows, rather than where or how he or she learned it, dominates the educational philosophy. There also appears to be a hierarchy of acceptability, with a majority of institutions in the country granting credit-by-examination, many amenable to granting credit for non-collegiate learning, and relatively few programs yet willing to grant credit for experiential learning.

The major program responses to the needs of adult learners for recognition of off-campus learning can be described and discussed in three forms. Some of the most recent non-traditional responses incorporate all three certification components:

1. Credit-by-examination
2. Certification of non-collegiate courses
3. Assessment of experiential learning
   a. prior learning
   b. sponsored learning

In addition to these non-traditional assessments of educational accomplishments, there are of course many non-traditional programs adhering quite closely to traditional methods of crediting learning through grades, credit hours, and semesters.

1. Credit-by-examination. Credit-by-examination is now accepted in more than two-thirds of the non-traditional programs in the country (Ruyle and Geiselman, 1974). While any examination acceptable to the faculty might be used to assess student knowledge, the College Level Examination Program (CLEP) is the best-known and most widely used program of standardized examinations; it is used by two-thirds of all colleges granting credit by examination (Ruyle and Geiselman, 1974). In 1975 almost 100,000 people showed up at some 900 test centers across the country to take one or more CLEP examinations in the expectation of receiving college credit from one of 1800 American colleges and universities offering credit for CLEP examinations.

Obviously the idea of granting credit on the basis of performance on a standardized examination has received widespread acceptance. But it is probably accurate to say that the acceptance of the practice is somewhat greater than the enthusiasm. At least 40 percent of the institutions surveyed in the Commis-

sion study (Ruyle and Geiselman, 1974) reported no encouragement to students to gain credit through examination; only 26 percent even publicized the availability of the opportunity, and most colleges place substantial limitations on the use of credit-by-examination.

The criticisms of granting credit by examination come from both the conservative and liberal wings of the educational establishment. On the one hand, critics contend that the tests are not an adequate substitute for the classroom experience, which presents a richer learning experience than can be documented by tests—especially nationally standardized tests with limited input from local faculty. Then too, there are a variety of criticisms ranging from technical matters such as norming to judgmental matters such as the amount of credit to be granted in various subjects. On the other hand, the liberal non-traditionalists are critical of the concept of credit-by-examination because it perpetuates the status quo, discouraging curricular and instructional innovations by trying to equate new forms of learning especially appropriate for adult learners to old forms of learning designed for traditional students. Keeton (1972, p. 141), for example, charges that the CLEP tests "are essentially abstractions from very traditional liberal arts and disciplinary objectives."

Despite criticisms from the right and the left, the examination model of non-traditional education seems to serve a legitimate need of adult learners, and traditionalists as well as non-traditionalists want to see some responsiveness on the part of colleges to the needs of adults to demonstrate and receive credit for learning which would only be repetitious were they required to comply with standard course requirements. Furthermore there is broad philosophical agreement that the certification of learning should not be inflexibly tied to process variables. A report from the CAEL project (Willingham, Burns, and Donlon, 1974) puts it well:

> The academic credit hour is useful for educational accounting and marking student progress, but the credit system is widely criticized because it resists educational reform and places too much emphasis on the time serving character of the college degree. Direct assessment of student learning can be a powerful agent in promoting educational flexibility because it provides a mechanism for recognizing learning independent of the circumstances under which it was accomplished (p. 39).

The problems in granting credit by examination center around the state of the art of measuring learning. Examinations are the most familiar and therefore perhaps the most commonly accepted measure we have of educational accomplishment. Any evaluation of this response component of non-traditional programs would have to consider the usual technical issues associated with reliability, validity, and standards as well as the needs of adult learners and the credibility of the examinations with employers and educational programs to which students may transfer.

2. Certification of Non-collegiate Courses. The task force on lifelong learning of the Postsecondary Education Convening Authority (Hodgkinson, Kaplin, McNett, and Nolfi, 1977) identified 17 sponsors or providers of educational programs. While many of these providers are not interested in obtaining college credit for their students, some of the courses are clearly comparable to courses taught on college campuses, and for many students college credit would be advantageous. But the primary avenues for attaining credit are credit-by-examination or assessment of student competencies. If no examination exists that "fits" the course, the assessment process becomes expensive and its use increasingly unlikely.

Colleges have long accepted courses taught by other colleges as transfer credit. With the proliferation of the sponsors of learning, a question naturally arises concerning the possibility of credit for college-level courses taught by the military, employers, educational television, etc. For 30 years, the American Council on Education has operated the Commission on the Accreditation of Service Experiences (CASE) to evaluate formal courses offered by the military services to recommend the type and amount of credit that colleges might grant for completion of college-level military courses. In 1972, more than one-third of traditional colleges and universities granted credit based upon CASE recommendations (Ruyle and Gieselman, 1974).

In response to a recommendation by the Commission on Non-Traditional Study, the ACE recently expanded its services by establishing the Office of Education Credit (OEC) which took on the formidable task of sending a team of subject matter specialists to the site of any organization wishing to

nominate a course for a college credit recommendation from the OEC. In its first two years of operation the OEC evaluated over 800 courses offered by more than 50 organizations in every state in the nation, involving some 180,000 students. The OEC publishes a guide with recommendations regarding the amount and category of credit which might legitimately be awarded. The "legitimacy," of course, derives from the national prestige of the ACE and from the standards established by the OEC for the evaluation of courses. (See Green and Sullivan, 1975, for a description of the process.) Notice that this method of certifying learning adheres to the traditional model of certifying the quality of the teaching rather than the quality of the learning. As such it represents a rather traditional assessment of non-traditional sponsors.

3. Assessment of Experiential Learning. The most visible leadership for the national interest in assessing experiential learning has come from the CAEL project (Cooperative Assessment of Experiential Learning) which was established in the early 70's as a consortium of 250 colleges working with measurement experts from Educational Testing Service to "develop through cooperative effort improved methods of assessment–methods that encourage flexible educational programs, assist the student in realizing educational goals, and provide an equitable and reliable basis for granting credit." (Willingham, Burns, Donlon, 1974, p. 1.) A CAEL survey of some 3000 two-and-four-year colleges revealed about 350 programs actively pursuing ways to grant credit for experiential learning. Of these 97 percent give credit for non-classroom learning experiences which were sponsored by the college, while 40 percent awarded credit for prior learning which occurred before the student enrolled. Credit is given most often for sponsored work experience, with 90 percent of the reporting community colleges and 85 percent of the 4-year institutions reporting such credit.

There is clearly a difference between sponsored experiential learning over which the college exercises a high degree of control and prior learning over which the college has no control. Prior learning credit usually involves the older students in which we are interested–80 percent of those receiving credit for prior learning were over 21–whereas sponsored programs frequently involve younger students getting their first work experience through internships, cooperative education programs and the like.

The data from the CAEL survey show that the *methods* used to assess experiential learning are quite different for prior and sponsored learning. For prior learning the three leading forms of assessment are documentation, testimony from an external source, and structured interview or oral examination. For sponsored experiences, the leading forms of assessment are observation of the performance in a natural situation, supervisory assessment (non-academic), and diaries or written reports.

The methods for assessing experiential learning are varied. The CAEL project identified 18 separate methods in use today, (Willingham, Burns and Donlon, 1974) but they also published a useful compendium of 9 assessment techniques that seemed especially useful in assessing experiential learning (Knapp and Sharon, 1975). Included were performance tests, simulations, assessment centers, essay examinations, objective written examinations, interviews, self-assessment, ratings, and project assessment.

The CAEL project distinguishes six stages of assessment in considering whether a student should receive credit for prior experiential learning. It is typically necessary to:

a. *Identify* the learning competencies to be assessed.
b. *Articulate* the learning to the educational goals of the student.
c. *Document* the participation of the student.
d. *Measure* the extent and character of the knowledge or skill acquired.
e. *Evaluate* whether the skill or knowledge meets the standard and how much credit should be awarded.
f. Provide a *transcript* with an appropriate description of the learning and its assessment.

The amount of credit awarded for prior learning varies greatly, but about 60% of the institutions awarding such credit grant 10 hours or less per student on the average, although 14 percent of the institutions award an average of 30 hours or more per student (Willingham, Burns, Donlon, 1974).

Unlike most of the other components of non-traditional programs, the new approaches to the measurement of educational accomplishments have come not from grass-roots practitioners but from national leadership heavily funded by private foundations or to a lesser extent by governmental agencies. Thus the response at the program level to measuring educational accomplishments has been largely a question of recognizing the need, accepting the tools

developed by national programs, and legitimizing the concept of measuring outcomes. The names associated with the three approaches to assessment are CLEP and the New York College Proficiency Exams; the ACE Office on Educational Credit, and CAEL. There are, however, also some program names associated with assessment degrees. Examples of these would be the New York Regents External Degree, Thomas A. Edison College, and the Connecticut Board for State Academic Awards. All three of these special programs use combinations of the assessment techniques described in this section.

5. Summary and Implications

The purpose of this review was to assess the state of knowledge about adult part-time learners and the programs designed to serve them. The primary sources of information were recent data collection projects sponsored by state and national agencies to determine the characteristics and needs of adult learners and potential learners. In addition, selected program descriptions were studied to determine current program responses to learner needs.

Our overall conclusion is that we know a great deal about a very narrow range of topics. The ubiquitous "needs assessments" that have dominated the study of non-traditional students in recent years have been, by and large, replications of the pattern set a decade ago by Johnstone and Rivera (1965) and more recently by the (CNS) Commission on Non-traditional Study (Carp, Peterson, & Roelfs, 1974). With minor modifications, statewide assessments have used highly similar methodologies to ask essentially the same questions of more or less comparable samples of adults; have analyzed the results in similar formats, and come up with quite consistent findings. There are few inconsistencies to be resolved and few surprises to be explained. While the size of the potential market may differ from region to region, the basic pattern of adult needs and interests does not. The major findings derived from our study of available needs assessments can be summarized as follows:

- Interest in adult education is related to socioeconomic status. Those who actually participate in educational activities are better off (in terms of indicators such as educational attainment, income, and job status) than those who express interest but are not participating, who in turn are better off than those who express no interest in further education. Past educational attainment seems to be the primary indicator of interest in lifelong education. The more education people have, the more they want and the more they are likely to get. Educational attainment is, of course, a complex variable incorporating motivation, opportunity, occupational and income status, ability, and other internal and external factors known to influence educational participation.
- Participation and interest in educational activities show considerable regional variation. Influential factors seem to be the opportunities available and the educational attainment of the populace. Regions with a high concentration of "free-access" colleges show high rates of adult educational activity. And opportunity, of course, sets off the chain reaction that raises educational attainment, educational expectations, and educational demand.
- Adults have a pragmatic orientation to education. They want to *use* education to improve their lives. If they don't have a good job, they want education which will enable them to get a better one. If they have a good job, they want the kind of education that will help them advance. If

they have the material things of life, (or at least as much as they think education will help them to attain) they want education to enrich the quality of life.

- The kind of education desired is related to adult life stages. The young are primarily interested in preparing for their futures; the middle-aged are interested in enhancing present involvement with jobs, family, and community; the elderly are interested in the use of leisure time.
- Education for adults must have high credibility. It must accomplish what they want it to accomplish—to give them job skills, to convince an employer of their merit, to help them raise a family or a garden, to help them find enjoyment in cultural pursuits or hobbies. Adults, on the average, are quite conservative in their educational tastes. The more dependent they are on external rewards, the less experimental they seem to be. Those who need education least to satisfy life's basic desires are the most experimental in their acceptance of departures from the traditional stereotypes of "quality" education. Thus radical reforms in education are likely to attract and serve the privileged members of society—at least until the reforms gain widespread credibility.
- Women are closing the educational gap between men and women, but there is some evidence that today's voluntary and largely self-supporting adult education is widening the gap between Caucasians and ethnic minorities and between the "haves" and the "have-nots."
- The diversity of the potential adult audience for education is enormous. Even relatively homogeneous demographic groupings show a great range of backgrounds, needs, and goals.
- There is a high correspondence between the "needs" identified in assessment studies and the component responses offered by non-traditional programs.
- There is great variety in the non-traditional programs studied. Such variety has made it increasingly difficult to identify "typical" programs or even to group programs into "typologies."
- The trend is toward *different forms* of education and services for non-traditional learners—as opposed to an expansion of traditional education to include adult learners. Many of the newest services, e.g., brokerage services, creditation and validation measures, and financial entitlements are designed and provided, not at the college and university level, but by non-profit agencies representing communities, consortia, and professional groups. Acceptance and legitimization, of course, occur at the local faculty and student levels.

All of the above conclusions can be considered confirmed and re-confirmed by state and national studies. They lead us to two observations:

1. We do not know nearly as much as we need to know about adult learning needs. Furthermore, we do not know as much as we *could* know from data already collected.
2. Although the problems of evaluating traditional school programs are difficult, the problems facing evaluators of non-traditional programs are infinitely more complex.

Let us analyze these assertions more carefully. The easy comparability across state studies simplifies the task of synthesizing the information, but the high degree of replication gives an unnecessary surplus of information about certain areas and a deficit of understanding about equally important matters. We recognize that the purpose of the state studies was to assess the needs of a particular state for planning purposes. They were not formulated as research projects designed to deepen our understanding of adult learning. Nevertheless with somewhat greater variety in method and analysis, we might have learned more about the underlying dynamics of adult learning needs, while at the same time providing information useful to the states. Since most of the studies reviewed herein were launched within a brief time span of one or two years, the coordination of a richly varied approach would not have been possible even if desirable. It may be useful now, however, to make some suggestions for future state surveys since more are in the planning stages.

Since adult learning is largely voluntary, *motivation for learning* is a variable of primary interest. Furthermore it appears to hold the key to narrowing the educational gap between over-represented and under-represented populations. Yet, to date we have

only rather superficial checklists of motives rather than any very adequate understanding of the dynamics that explain why those with low educational attainment lag so far behind those with higher educational attainment in their interest in and pursuit of educational opportunity. To know that the population groups that society is most interested in reaching—those with low educational attainment—are primarily interested in upward job mobility would lead us to emphasize job training, but it tells us little about why the poorly educated, who express an interest in job training, seem not to get around to registering for courses. A number of explanations have occurred to people. Among them are lack of knowledge about opportunities, lack of self-understanding about talents and goals, lack of self-confidence as learners, lack of money, dislike of school, lack of transportation and childcare, etc. These variables frequently appear in lists of "barriers" to adult participation. And we are quite likely to be given a cross-tabulation of perceived barriers by level of educational attainment. What we are *not* likely to find out is what common barriers are faced by those who have common interests (as opposed to those having common demographic characteristics) or why a given person expresses interest but fails to sign up.

The latter piece of information could be provided by greater variety in method, e.g., why not some probing in-depth interviews to supplement survey data? The other piece of information could be provided by greater variety in analysis, e.g., why not use something other than (or in addition to) demographic descriptors as independent variables?

The Iowa study (1976) is a commendable example of what can be done with more varied analyses of existing data. They used subject matter interest as an independent variable. This simple variation enabled them to present profiles of learners who expressed interest in a common subject. Profile 5, reproduced below, describes the potential market for education courses in Iowa.

The possibilities of getting much more information out of existing data are almost endless. While demographic descriptors are very useful for some purposes, we may have milked those data almost dry, at the cost of ignoring some other analyses that would be more helpful in designing and evaluating programs for non-traditional learners.

If programs are to meet the needs of *groups* of students, then some relatively homogenous needs profiles must be identified. The student needs taxonomy presented in Chart A provides some basis for identifying educationally relevant dimensions by which groups of students can be identified. For example, location is a variable which is primary to some underserved people—prisoners, physically handicapped, geographically isolated, etc. It would be useful to know what these location-restricted people want and need. Yet few studies have asked the right question or done the kind of analysis which would provide this simple display of information. But almost every study has analyzed the profiles of "women" for example, only to rediscover that women learners present a very heterogenous educational needs profile. It would be useful, we suggest, to display the profile of needs and characteristics of groups of adults with high priority or absolutely essential needs. For some potential learners, location is all important. For others, group instruction is a high priority need because their motivation is companionship and the opportunity to meet new people. In short, the profile of potential learners with critical educational needs has been neglected in the near-universal search for profiles of learners with common demographic characteristics. We would like to encourage future investigators to identify some target clientele based on the educationally-significant variables identified in the needs taxonomy.

We would also like to encourage future state studies directors, as well as other researchers, to vary the methods of data collection. The surveys have generally been good surveys, and a few have been exceptional, but surveys generally describe; they don't explain very much. A really good interpreter of data can tease out some partial explanations in the patterns of relationships between variables, but a skilled and sensitive interviewer can bring some new insights and launch some new hypotheses that would help all of us to move beyond description toward explanation.

The other distinct limitation of the survey in the field of non-traditional education is that its demands for quick, short answers can tell us what people know about, but it can't tell us much about how people would respond to something they don't know about. This is a particular problem with the cutting edge of non-traditional education because the average adult is way behind the average non-traditionalist in thinking about what is possible. Adults may look conservative because their knowledge of what is possible in education is 20 years out of date. Were we to explore new ways of asking our questions, we might find quite different responses. The point is that we are not making much progress in explaining the facts that we

PROFILE 5

SUBJECT CHOSEN BY AT LEAST 1% OF THE STATE SAMPLE

EDUCATION (1.75%)
(teacher training for certification)

Who are they?

There is still a large reservoir of people in the field of education who want training or updating of skills: two-thirds female, professional in nature, who often belong to a teachers' union, and who are mainly 25-40 years old. Twenty-eight per cent have a college education or beyond; an additional two-thirds have some college. Three-quarters of them earn between $10,000 and $25,000. More than 3% are non-white. They tend to be spread all over, the largest group in moderate-sized cities.

How serious are they?

Very serious. Half plan to take a course in the next two years, mainly for job requirements or promotion, or to work toward a master's degree or school certificate. Increased income is a strong motive. They plan to spend a lot of money for this education: half expect to pay more than $2,500. They also expect to spend a good bit of time learning: 40% will devote 40 hours a week or more.

Under what circumstances can they learn?

Private colleges rank highest, trailed by the Regent's Universities. Institutional prestige is a factor with them, unlike any other group. Fourteen per cent favor a college without walls format. Traditional day classes are also favored, but during a season when job responsibilities do not interfere. A good number like the idea of TV or radio classes, independent study, or correspondence study. Convenience in scheduling is probably the key to success in attracting these potential learners, particularly if offered by a prestige-laden private college.

What other subjects interest them?

Child development, consumer education, crafts, gardening, history, humanities, public affairs, sewing, sports and games, and travel.

What services do they want?

They don't need information or advice: they want credit toward a degree or certificate! They like the idea of assessment of prior informal learning, a credit bank concept, and testing of subject skills.

What problems do they face?

Cost is uppermost in their minds, together with home and job responsibilities, child care problems, and scheduling.

Source: Iowa, 1976.

know exist. Miller, quoted by Rubenson (1977, p. 4) writes that "Without [better understandings] we are condemned forever to repeating status surveys and refining our empirical categories to the point of meaninglessness."

The second observation arising out of this review has to do with the difficulty of designing evaluation studies of non-traditional programs. We remain firm in our conviction that non-traditional education can and should be evaluated, but it is extremely difficult to do it using traditional measures—which are the measures we happen to possess right now. It seems clear to us that the non-traditional programs most in need of sophisticated evaluation are not those representing a simple expansion of the college and university system to include persons previously excluded because of age. We agree with the Commission (1973, p. xv) that "non-traditional study is more an attitude than a system . . ." New attitudes about the goals and purposes of adult education are emerging, and evaluation is going to have to come to terms with that reality. Take, for example, the matter of educational achievement—an obvious candidate for evaluation in traditional education where young people are sent to school to learn a body of knowledge that will provide the background for learning more advanced knowledge in a basically linear school system. Much adult learning is not based on linear progression, and furthermore, the primary goal is not the absorption or retention of knowledge but the *use* of it. Once the role of traditional achievement measures is questioned, the issue of "standards" arises. When that spectre is raised, as it is increasingly, the enormous diversity of the goals and purposes of non-traditional education forces us to a deeper analysis of "quality" education. The issues are not simple and the basic challenges of non-traditional education are setting off healthy chain reactions in both program development and evaluation design. We would like to urge evaluators and policy-makers and program developers to work very closely toward evaluating present efforts and improving future programs.

> Education to match our needs—as individuals and as a society—this is *everyone's* goal. We should work toward it enthusiastically, with a sense of commitment and with confidence that there are good and valid ways that do not lessen quality even when they are different from traditional standards.
>
> Samuel B. Gould
> in Diversity by Design, 1973.

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Appendix A
Studies of Characteristics and Needs of Potential Learners

Appendix A describes major surveys of adult potential learners (that is, adults who express interest in participating in adult education). The Appendix describes these potential learners' demographic characteristics and their educational needs and interests, as well as the stated purposes of the studies, study sponsors, and samples and methods utilized in the surveys.

In order to provide an indication of the sophistication and complexity of the survey designs, the chart shows the number of categories provided for each variable by the survey questionnaires. For example, the chart shows that in the California study (1975), the questionnaire had five categories for racial/ethnic group and provided a list of 17 barriers to learning. (Note: The studies did not always analyze or report all the categories and variables on which they collected data.) When a question was open-ended, the number of categories which the study reported is given in parentheses.

Appendix A: Studies of Characteristics and Needs of Potential Learners

	CALIFORNIA (1975)	CENTRAL NEW YORK (1975)	COLORADO (1975)[1]
PURPOSES	Needs assessment Resources inventory Recommendations Evaluation of a proposal.	Needs assessment Resources inventory Proposed model for delivering AE counseling	Needs Assessment Resources inventory Employer needs survey
STUDY SPONSOR	California Legislature	NY State Education Dept. (Funded under Title I, HEA)	Colorado Dept. of Education & State Board for Community Colleges & Occupational Education
SAMPLE	N=1048 persons, 18 yrs. or older Probability sample	N=1502 persons, 18 yrs. or older and not full-time students	N=5337 persons, 16 yrs. or older & not enrolled in formal education Random sample
STUDY METHOD	Field interview	Field interview (largely open-ended)	Field interview
DEMOGRAPHIC VARIABLES[2]			
Sex	2	2	2
Age	12	4	7
Race/ethnic group	5	2	3
Education	7	8	11
Income	7	4	5
Occupation	open-ended (5)	open-ended (6)	4
Marital status	–	2	5
Rural-urban	–	2	–
Military status	–	–	–
Full-time student	yes	–	–
Part-time student	yes	yes	yes
DEFINITION OF POTENTIAL LEARNERS	Interested in "some form of further learning beyond high school" –within next two years	Select "things you might like to learn" in any of 7 broad areas named by interviewer (e.g., job-related subjects, home & family living); no time limit	(Not available)
POTENTIAL LEARNERS AS % OF SAMPLE	59%	97%	92%

	CALIFORNIA (1975)	CENTRAL NEW YORK (1975)	COLORADO (1975)[1]
NEEDS/DESIRES[2]			
Scheduling	(Included under methods)		8
Location	13	open-ended[3] (6)	6
Reason for location choice	7	–	–
Methods	("modes of learning") 13	open-ended[3] (10)	–
Subjects	open-ended (167 identified)	open-ended[3] (26)	–
Motivations/reasons for learning	11	open-ended[3] (11)	4
Barriers	17	open-ended[3] (19)	–
Counseling & education services desired	12	(several questions on counseling interest)	2
Credit	9	open-ended[3] (7)	2
Degree/diploma	–	4	–
Amount $ willing to pay	open-ended (9)	open-ended (5)	5
Time per wk. willing to give	7	open-ended[3] (8)	5
Length of time willing to study	–	open-ended[3] (6)	6
OTHER[2]			
Knowledge of educational opportunities	–	open-ended[3] (several questions)	(several questions)
Self-confidence	–	–	How well do you learn? (several questions)
Evaluation of education	–	–	How was AE program helpful? (several questions)
Job satisfaction/interest in changing jobs	–	–	(several questions)
Want public $ for AE	–	–	–

Appendix A: Studies of Characteristics and Needs of Potential Learners (continued)

	COMMISSION ON NON-TRADITIONAL STUDY (1974)	FLORIDA (1976)
PURPOSES	Needs assessment[4] (Related studies provide: Resources inventory, Literature review, Recommendations)	Needs assessment[4] Resources inventory Employer needs survey Recommendations Literature review
STUDY SPONSOR	Commission on Non-Traditional Study (funded by Carnegie Corp. & Educational Foundation of America)	State University System of Florida and the Florida Division of Community Colleges
SAMPLE	N=2004 persons; N weighted=3910; 18-60 yrs. and not full-time students. Probability sample.	N=881 persons, 16 yrs. or older Stratified random sample from phone directories
STUDY METHOD	Field interview	Telephone interview (largely open-ended)
DEMOGRAPHIC VARIABLES[2]		
Sex	2	2
Age	6	(4)
Race/ethnic group	6	5
Education	12	open-ended
Income	8	open-ended
Occupation	open-ended (12)	open-ended (13)
Marital status	4	4
Rural-urban	2	4
Military status	–	–
Full-time student	(yes) excluded from analysis	yes
Part-time student	yes	yes
DEFINITION OF POTENTIAL LEARNERS	Interested in "anything . . . you'd like to know more about"; no time limit (may be current AE participants)	Interested in "*any* topic or skill"—within next 2 yrs.
POTENTIAL LEARNERS AS % OF SAMPLE	77%	42%

	COMMISSION ON NON-TRADITIONAL STUDY (1974)	FLORIDA (1976)
NEEDS/DESIRES[2]		
Scheduling	12	–
Location	18	6
Reason for location choice	–	open-ended (6)
Methods	12	12
Subjects	49	open-ended (10)
Motivations/reasons for learning	21	open-ended (6)
Barriers	25	open-ended (7)
Counseling/educ. services desired	2 (counseling; transcript sent to employers, institutions)	(interest in counseling/information)
Credit	8	8
Degree/diploma	8	open-ended (7)
Amount $ willing to pay	5	–
Time per wk. willing to give	–	open-ended (5)
Length time willing to study	–	open-ended (6)
OTHER[2]		
Knowledge of educational opportunities	1	–
Self-confidence	–	–
Evaluation of education	–	Have higher ed. schools been beneficial to you?
Job satisfaction/interest in changing jobs	–	–
Want public $ for AE	–	3

	COMMISSION ON NON-TRADITIONAL STUDY (1974)	FLORIDA (1976)
NEEDS/DESIRES[2]		
Scheduling	12	–
Location	18	6
Reason for location choice	–	open-ended (6)
Methods	12	12
Subjects	49	open-ended (10)
Motivations/reasons for learning	21	open-ended (6)
Barriers	25	open-ended (7)
Counseling/educ. services desired	2 (counseling; transcript sent to employers, institutions)	(interest in counseling/information)
Credit	8	8
Degree/diploma	8	open-ended (7)
Amount $ willing to pay	5	–
Time per wk. willing to give	–	open-ended (5)
Length time willing to study	–	open-ended (6)
OTHER[2]		
Knowledge of educational opportunities	1	–
Self-confidence	–	–
Evaluation of education	–	Have higher ed. schools been beneficial to you?
Job satisfaction/interest in changing jobs	–	–
Want public $ for AE	–	3

Appendix A: Studies of Characteristics and Needs of Potential Learners (continued)

	NEW YORK (1977)	NORTHEAST CALIFORNIA (1972)	NORTHEAST NEW YORK (1974)
PURPOSES	Needs assessment—to supplement NY regional surveys[4] Survey of CE delivery system (only public educ. insts., and not including 4-yr. colleges) CE staff inservice training needs survey	Needs assessment—part of project for extending higher educ. services "Decision-maker" survey	Needs assessment Resources inventory Employer survey Develop model for regional planning Survey of current AE students[5]
STUDY SPONSOR	NY State Education Department (funded under Title VI, Adult Ed. Act)	California Coordinating Council for Higher Education	NY St. Ed. Dept. (funded) under Title I, HEA)
SAMPLE	N=20,486 persons, 16 yrs. or older and not full-time students Random sample Does *not* include NYC residents	N=1628 persons, 18 yrs. or older Stratified weighted random sample	N=1055 persons, 18 yrs. or older and not full-time students Random sample
STUDY METHOD	Field interview	Field interview	Field interview
DEMOGRAPHIC VARIABLES[2]			
Sex	2	2	2
Age	5	5	open-ended
Race/ethnic group	6	6	3
Education	7	8	6
Income	10	6	18
Occupation	–	9	open-ended (12)
Marital status	3	–	5
Rural-urban	4	(rural)	5
Military status	–	–	(4-part question)
Full-time student	–	yes	–
Part-time student	yes	yes	yes
DEFINITION OF POTENTIAL LEARNERS	Express interest in learning about one or more of 42 subjects in list provided by interviewer	Desire to attend college in the area; no time limit	Currently interested in "courses . . . you felt you would like to take but did not"

	NEW YORK (1977)	NORTHEAST CALIFORNIA (1972)	NORTHEAST NEW YORK (1974)
POTENTIAL LEARNERS AS % OF SAMPLE	94%	36% (plus 14% who now attend or plan to)	34%
NEEDS/DESIRES[2]			
Scheduling	14	9 (schedules for external degree prog.)	16
Location	11	(2- or 4-year college)	6
Reason for location choice	7	–	–
Methods	7	Interested in home instruction?	4 (classes vs. indep. study)
Subjects	43	19 degree prog.; 23 voc./personal subj.	30
Motivations/reasons for learning	8	–	8
Barriers	21	7	13
Counseling/educ. services desired	(questions on counseling and information interests)	–	1 (family center)
Credit	3	8	–
Degree/diploma	7	External degree interest	–
Amount $ willing to pay	6	–	7
Time per wk. willing to give	–	–	–
Length time willing to study	4	–	–
OTHER[2]			
Knowledge of educational opportunities	(several questions)	Which CC district are you in?	(several questions, including knowledge of nontraditional progs.)
Self-confidence	–	–	–
Evaluation of education	–	Favorable/unfavorable impression of local community college?	–
Job satisfaction/interest in changing jobs	–	–	(several questions)
Want public $ for AE	–	–	3

Appendix A: Studies of Characteristics and Needs of Potential Learners (continued)

	NORTHERN NEW YORK (1976)[1]	ONTARIO (1976)	WESTERN NEW YORK (1976)
PURPOSES	Needs assessment Resources inventory Analysis of course overlap Recommendations Contribute to statewide planning Survey of current AE students[5]	Needs assessment[4] Evaluation of a proposal	Needs Assessment Resources inventory Contribute to statewide planning
STUDY SPONSOR	NY State Education Dept. (funded under Title I, HEA)	Ontario Educ. Communications Authority	NY State Education Dept. (funded under Title I, HEA)
SAMPLE	N=about 600 persons Stratified random sample from phone directories	N=1541 persons, 18-69 yrs. & not full-time students (unless heads of households) Weighted random sample	N=about 1500 persons, 18 yrs. or older Stratified random sample
STUDY METHOD	Telephone interview (Also: four surveys of special groups, e.g., rural women)	Field interview	Field interview in north (urban) counties: telephone interview in south (rural) counties
DEMOGRAPHIC VARIABLES[2]			
Sex	(not reported)	2	2
Age	"	10	(7)
Race/ethnic group	"	(language groups: 9)	4
Education	"	13	7
Income	"	10	open-ended (7)
Occupation	"	open-ended	open-ended (4)
Marital status	"	5	5
Rural-urban	"	4	–
Military status	"	–	–
Full-time student	"	–	–
Part-time student	"	–	yes
DEFINITION OF POTENTIAL LEARNERS	Can name areas of study that interest them	Interested in undertaking learning activities in next year or two, but not now involved in learning	Want to participate in adult learning at some point after completing full-time education (including those who had been AE participants but are no longer interested)

	NORTHERN NEW YORK (1976)[1]	ONTARIO (1976)	WESTERN NEW YORK (1976)
POTENTIAL LEARNERS AS % OF SAMPLE	40%	18%	58%
NEEDS/DESIRES[2]			
Scheduling	(not reported)	–	17
Location	"	–	open-ended (6)
Reason for location choice	"	–	–
Methods	"	10	8
Subjects	(50+)	open-ended (several hundred noted)	open-ended (48)
Motivations/reasons for learning	6	open-ended (i l)	open-ended (22)
Barriers	5	14	open-ended (19)
Counseling & ed. services desired	(not reported)	(sev. questions on counseling interest)	(counseling/advising interest; childcare)
Credit	"	6	8
Degree/diploma	2	8	–
Amount $ willing to pay	(not reported)	8	7
Time per wk. willing to give	"	8	open-ended
Length time willing to study	"	9	–
OTHER[2]			
Knowledge of educational opportunities	(2 questions)	8 (1 question)	(several questions)
Self-confidence	(not reported)	–	–
Evaluation of education	"	–	–
Job satisfaction/interest in changing jobs	"	–	(several questions)
Want public $ for AE	"	–	6

Appendix A: Studies of Characteristics and Needs of Potential Learners (continued)

	IOWA (1976)	LONG ISLAND NY (1976)
PURPOSES	Needs assessment Resources inventory Recommendations Evaluation of proposal Survey of current AE students[5]	Needs assessment Resources inventory Respond to state and institutional planning needs
STUDY SPONSOR	Iowa Higher Education Facilities Commission	Long Island Reg. Adv. Council on Higher Ed. & NY St. Ed. Dept. (funded under Title I, HEA)
SAMPLE	N=800 persons, 18 yrs. or older Representative sample	N=1112 persons (in mail survey) 18 yrs. or older and not full-time students
STUDY METHOD	Field interview	Mail survey (Also: 4 surveys of special groups–e.g., low income, senior citizens)
DEMOGRAPHIC VARIABLES[2]		
Sex	2	2
Age	10	open-ended (4)
Race/ethnic group	–	4
Education	8	4
Income	6	5
Occupation	13	open-ended (8)
Marital status	–	–
Rural-urban	3	–
Military status	–	–
Full-time student	yes	–
Part-time student	yes (2)	–
DEFINITION OF POTENTIAL LEARNERS	Interested in "some form of further learning beyond high school"–within next 2 years	Say there definitely is or may be a reason for them to consider participating in learning (excluding current participants)

	IOWA (1976)	LONG ISLAND NY (1976)
POTENTIAL LEARNERS AS % OF SAMPLE	36%	70%
NEEDS/DESIRES[2]		
Scheduling	(included under methods)	–
Location	14	8
Reason for location choice	7	–
Methods	15	–
Subjects	55	8
Motivations/reasons for learning	11	8
Barriers	17	33
Counseling/educ. services desired	12	–
Credit	11	–
Degree/diploma	–	–
Amount $ willing to pay	10	–
Time per wk. willing to give	7	–
Length time willing to study	–	–
OTHER[2]		
Knowledge of educational opportunities	(2 questions)	8 (1 question)
Self-confidence	–	–
Evaluation of education	–	–
Job satisfaction/interest in changing jobs	–	–
Want public $ for AE	–	–

[1] Survey questionnaire was not available; description of the survey's dimensions is therefore based on reported variables.

[2] Chart shows the number of categories collected on each variable by the questionnaire. (Exception: When a question was open-ended, the number of categories reported in the study is given in parentheses.)

[3] Interviewer had a list of examples to provide, "if necessary."

[4] Data on current AE participants and their motives and subjects studied were collected through the same survey. Generally, the same dimensions were assessed. The CNS (1974) and Ontario (1976) studies provide extensive analysis of these current AE learners.

[5] See Appendix B, for separate survey of current AE participants.

Appendix B
Studies of Characteristics and Learning Conditions of Adult Education Participants

Appendix B describes major surveys of participants in adult and continuing education (that is, individuals currently enrolled in learning activities designed for adults).

(Appendix B follows the same basic format as that for Appendix A.)

Appendix B: Studies of Characteristics and Learning Conditions of AE Participants

	IOWA (1976)	MASSACHUSETTS (1973)
PURPOSES	Survey of current AE students[1]	Survey of current AE students Resources inventory Recommendations
STUDY SPONSOR	Iowa Higher Ed. Facilities Commission	Massachusetts Advisory Council on Education
SAMPLE	N=650 current students, 18 yrs. or older & not enrolled full-time in regular on-campus program Questionnaire distributed to 65 Iowa higher ed. institutions	N=over 6000 enrollees in continuing ed. classes in higher education institutions
STUDY METHOD	Questionnaire given or administered by instits. to a 3-5% sample of their AE students	Questionnaire given in class to students in 7% random sample of cont. ed. classes
DEMOGRAPHIC VARIABLES[2]		
Sex	2	2
Age	10	5
Race/ethnic group	6	5
Education	8	7
Income	5	8
Occupation	open-ended (9)	9
Marital status	–	3
Rural-urban	3	–
Military status	–	3
Full-time student	–	–
Part-time student	yes	–
DEFINITION OF AE PARTICIPANT	Current part-time student (12 semester hrs. or less) in credit or noncredit higher education programs, on or off campus	Students enrolled in continuing ed. classes in degree-granting higher ed. institutions

	IOWA (1976)	MASSACHUSETTS (1973)
LEARNING CONDITIONS[2]		
Schedule(s)	(included under methods)	16
Location(s)	13	3
Method(s)	14	–
Subject(s)	open-ended (16 categories reported)	9
Motivations/reasons for learning	10	6
Previous barriers/current difficulties	16 (previous barriers)	8 (problems in enrolling in the future)
Credit	9	4
Degree/diploma orientation	9	9
Amount $ paying	open-ended (median reported)	9
Employer/other reimbursement	2	8
Time spending per week	open-ended (median reported)	5
ADDITIONAL SERVICES/PREFERRED CONDITIONS[2]		
Schedule(s)	(included under methods)	4 (preferred)
Location(s)	13 (preferred)	2 (additional)
Method(s)	14 (acceptable)	1 ("open univ." interest)
Subject(s)	–	6 (additional)
Counseling & educ. services desired	11	3 (credit for exper., counseling, family center)
Amount $ willing to pay	open-ended (median reported)	9
Time willing to give	open-ended (median reported)	–
OTHER[2]		
How learned about program	–	8
Evaluation of education	–	–
Attractions to program	–	5
Interest in changing jobs	–	(several questions)

Appendix B: Studies of Characteristics and Learning Conditions of AE Participants (continued)

	MEDSKER ET AL. (1975)	NORTHEAST NEW YORK (1974)	NORTHERN NEW YORK (1976)[3]
PURPOSES	Examination of consequences of degree programs, in terms of students, credibility, impact, and costs	Survey of current AE students[1]	Survey of current AE students[1]
STUDY SPONSOR	Center for Research and Development in Higher Education, UC-Berkeley (funded by NSF-Rann)	NY State Education Dept. (funded under Title I, HEA)	NY State Education Dept. (funded under Title I, HEA)
SAMPLE	Individual samples (60-602) of students in 13 selected extended degree programs (plus institutional data on students in 5 other progs.)	N=1134 students enrolled in continuing ed. divisions in 18 higher ed. institutions Representative sample	N=1767 continuing ed. students at six higher ed. instits. plus 451 students at Board of Cooperative Ed. Services
STUDY METHOD	Questionnaire administered directly to students in the 13 programs	Questionnaire distributed in selected continuing education classes	Questionnaire administered in class to all cont. ed. students
DEMOGRAPHIC VARIABLES[2]			
Sex	2	2	2
Age	8	5	7
Race/ethnic group	6	5	–
Education	8	7	8
Income	9	8	8
Occupation	open-ended	9	10
Marital status	4	3	3
Rural-urban	–	–	–
Military status	5	3	3
Full-time student	yes	–	–
Part-student	yes	yes	yes

	MEDSKER ET AL. (1975)	NORTHEAST NEW YORK (1974)	NORTHERN NEW YORK (1976)[3]
DEFINITION OF AE PARTICIPANT	Students in extended degree programs (i.e., program designed primarily for adults) in higher ed. institutions	Part-time students (18 yrs. or older & taking less than 12 credit hours) in higher ed. institutions	Part-time students enrolled in credit or noncredit programs, and full-time students also enrolled in noncredit cont. ed. programs
LEARNING CONDITIONS[2]			
Schedule(s)	(questions about scheduling flexibility)[4]	16	(not reported)
Location(s)	(questions about location convenience)[4]	3	"
Method(s)	11[4]	–	"
Subject(s)	open-ended	9	"
Motivations/reasons for learning	10	6	6
Previous barriers/current difficulties	16 (current difficulties)	8 (problems enrolling in future)	(not reported)
Credit	(questions about credit for prior or nonschool learning)	4	4
Degree/diploma orientation	7	9	6
Amount $ paying	–	6	(not reported)
Employer/other reimbursement	(2 questions)	8	8
Time spending per week	7	5	(not reported)

Appendix B: Studies of Characteristics and Learning Conditions of AE Participants (continued)

	MEDSKER ET AL. (1975)	NORTHEAST NEW YORK (1974)	NORTHERN NEW YORK (1976)[3]
ADDITIONAL SERVICES/ PREFERRED CONDITIONS[2]			
Schedule(s)	–	4 (preferred)	(not reported)
Location(s)	–	2 (additional)	"
Method(s)	11 (additional)	1 ("open univ." interest)	"
Subject(s)	8 (additional)	6 (additional)	"
Counseling & ed. services desired	–	3	"
Amount $ willing to pay	–	6	"
Time willing to give	–	–	"
OTHER[2]			
How learned about program	11	8	(not reported)
Evaluation of education	(several questions)	–	"
Attractions to program	16	5	5
Interest in changing jobs	–	(several questions)	(several questions)

[1] See Appendix A for other purposes, including separate survey of adult potential learners.

[2] Chart shows the number of categories collected on each variable by the questionnaire. (Exception: When a question was open-ended, the number of categories reported in the study is given in parentheses.)

[3] Survey questionnaire was not available; description of the survey's dimensions is therefore based on reported variables.

[4] Study also collected information from the institutions on individual programs' schedules, locations, and methods.

Appendix C
Adult Educational Needs Assessments and Surveys of Continuing Education Students*

ARKANSAS (1974)

Campbell, M., et al. *New students: New markets for the University of Arkansas? Educational needs and interests in the Northwest Arkansas area.* Fayetteville: University of Arkansas, 1974.

CALIFORNIA (1975)

Hefferlin, JB, Peterson, R.E., & Roelfs, P.J. *California's need for postsecondary alternatives* (First technical report, Part I). Sacramentao: California Legislature, 1975.

CENTRAL NEW YORK (1975)

Wilcox, J., Saltford, R.A., & Veres, H.C. *Continuing education: Bridging the information gap.* Ithaca: Institute for Research and Development in Occupational Education, Cornell University, 1975.

COLORADO (1975)

Barlow, B.M., & Timiraos, C.R. *Colorado adult needs assessment* (Final technical report). Denver: Colorado Department of Education and State Board for Community Colleges and Occupational Education, 1975.

COMMISSION ON NON-TRADITIONAL STUDY (1974)

Carp, A., Peterson, R.E., & Roelfs, P.J. Adult learning interests and experiences. In K.P. Cross, J. Valley & Associates (Eds.). *Planning non-traditional programs.* San Francisco: Jossey-Bass, 1974.

FLORIDA (1976)

Florida Commission on Educational Outreach and Service. *Access to knowledge* (Vol. II: Supporting data). Tallahassee: State University System of Florida, 1976.

GENESEE VALLEY NEW YORK (1975)

Carlivati, P.A. *Toward developing a coordinated system of postsecondary continuing education in the Genessee Valley region, a summary report.* Rochester: Rochester Area Colleges, 1975.

HAYWARD, CALIFORNIA (1976)

McCabe, G.E., & Straton, R.A. *University courses via cable TV: A survey of households within the service area of one cable company and projections for a statewide program.* Los Angeles: The California State University and Colleges, The Consortium, 1976.

ILLINOIS (1975)

A.C. Nielsen Company. *Adult educational interest survey.* Northbrook, Ill.: Author, 1973.

IOWA (1976)

Hamilton, I.B. *The third century: Postsecondary planning for the nontraditional learner.* Princeton, N.J.: Educational Testing Service, 1976.

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*This list includes major national, state, and regional needs assessments of adult potential learners and surveys of current continuing education students which have been compiled in the last five years.

LONG ISLAND NEW YORK (1976)

Heston, W.M., & Fantz, J.C. *Toward a comprehensive coordinated system of postsecondary continuing education for Long Island.* New York: Long Island Regional Advisory Council on Higher Education, 1976.

MASSACHUSETTS (1973)

Nolfi, G.J., & Nelson, V.I. *Strengthening the alternative postsecondary education system: Continuing and part-time study in Massachusetts* (Vol. II: Technical report). Cambridge: University Consultants, 1973.

MEDSKER ET AL. (1975)

Medsker, L., Edelstein, S., Kreplin, H., Ruyle, J., & Shea, J. *Extending opportunities for a college degree: Practices, problems, and potentials.* Berkeley: Center for Research and Development in Higher Education, University of California, 1975.

MID-HUDSON NEW YORK (1975)

Vivona, R., Miringoff, M., & Watsky, C. *Adult post-secondary continuing education in the mid-Hudson region: Increased access to improve the quality of life.* Poughkeepsie, N.Y.: Associated Colleges of the Mid-Hudson Area, and New Paltz, N.Y.: Mid-Hudson Region Continuing Education Project, 1975.

NCES (1969)

National Center for Educational Statistics. *Participation in adult education, final report, 1969.* Washington, D.C.: Author and Department of Health, Education, and Welfare, 1974.

NCES (1972)

National Center for Educational Statistics. *Participation in adult education, final report, 1972.* Washington, D.C.: Author and Department of Health, Education, and Welfare, 1976.

NCES (1975)

National Center for Educational Statistics. *Participation in adult education, final report, 1975.* Washington, D.C.: Author and Department of Health, Education, and Welfare, in press.

NEW YORK (1977)

New York State Education Department (University of the State of New York), Division of Continuing Education. *New York State continuing education needs assessment* (Report No. 1: Statewide analysis). Albany, N.Y.: State Department of Education, 1974.

NORTHEAST CALIFORNIA (1972)

Treseder, C. *A survey of attitudes toward higher and continuing education in northeastern California.* San Jose: Diridon Research Corporation, 1972.

NORTHEAST NEW YORK (1974)

Numberger, R.G. *A profile of need: A study of postsecondary education needs in northeastern New York State.* Albany: College of General Studies, State University of New York at Albany, 1974.

NORTHEAST NEW YORK (1975)

Stelzer, L., & Banthin, J. *A study of postsecondary education needs in northeastern New York State: Secondary analysis.* Latham: Capital Associates, 1975.

NORTHERN NEW YORK (1976)

Correa, J.M. *Regional needs and resources for postsecondary education: A report of the northern region postsecondary education group.* Potsdam: Associated Colleges of the St. Lawrence Valley, 1976.

ONTARIO (1976)

Waniewicz, I. *Demand for part-time learning in Ontario.* Ontario, Canada: Ontario Educational Communications Authority, 1976.

SUN (1972)

Ross, G.R., Brown, R.D., & Hassel, M. *Clientele study for the proposed state university of Nebraska (SUN)–a multi-media off-campus collegiate program.* Lincoln: University of Nebraska, 1972.

SUN (1974)

Eggert, J.D. *An examination of goals of potential and actual learners: University of Mid-America/ State University of Nebraska* (working paper No. 1). Lincoln: University of Mid-America/State University of Nebraska, Office of Research and Evaluation, 1974.

SUN (1977)

Bryan, D., & Forman, D.C. *Characteristics of SUN learners (first five offerings): Statistical summary No. 4.* Lincoln, Neb.: University of Mid-America, 1977.

TEXAS (1974)

Neidhart, A.C. (Ed.). *Continuing education for Texas: Special studies of non-traditional approaches to education.* Austin: Southwest Texas State University, 1974.

WASHINGTON (1976)

Randall, M.E., Pailthorp, K., & Bigelow, M.L. *Postsecondary education in the Tri-Cities.* Olympia: Washington Council for Postsecondary Education, 1976.

WESTERN NEW YORK (1976)

Robinson, K., & Herdendorf, P.S. *Final report on the survey of public demand/need for postsecondary continuing education for adults (lifelong learning programs) in western New York.* Buffalo: Project Impact, the Western New York Postsecondary Continuing Education Study, 1976.

THE IDENTIFICATION OF DECISIONMAKERS CONCERNED WITH NONTRADITIONAL DEGREE PROGRAMS AND AN ANALYSIS OF THEIR INFORMATION NEEDS

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June 1977

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1. Introduction

This report stems from a contract with the National Institute of Education to investigate the bases on which decisions about nontraditional degree programs are made. Because of an interest in evaluation of such programs, the Institute's staff needs to learn as much as possible about the information needs of decisionmakers who establish, approve, maintain, modify, and support nontraditional degree offerings. It was the Institute's premise that many evaluation studies are conducted without sufficient input from those decisionmakers. In this study the Center sought to determine what information decisionmakers rely on as they deal with efforts on the part of colleges and universities to serve a new adult clientele in nontraditional postsecondary education programs.

Specifically, the stated objectives of the study were:

1. To identify those persons who make decisions affecting nontraditional education and to determine the decisionmaking process in the development of programs and implementation of policies to serve nontraditional students.
2. To identify the questions, policy issues, and pending decisions at various levels of decisionmaking in nontraditional degree education.
3. To identify the information needs of decisionmakers in nontraditional education to be considered in an overall evaluation study, which might not be considered in individual program evaluation studies.

It seemed especially relevant to identify the perceived policy issues pertaining to nontraditional degree offerings—both those that have been faced and those that appear imminent—since decisions are not made in a vacuum but rather are usually related to issues at hand. Thus special consideration was given to decisions concerning clientele, financial support, program features, and organization, policy areas that had been identified and widely considered in the Center's previous research and development activities.[1]

Because of time limitations, the staff decided at the outset to limit its inquiry to three states—California, Illinois, and New York—where efforts to develop nontraditional programs were known to be in progress. Also, these states were selected because they vary greatly in the manner by which higher education is coordinated and administered. Nine nontraditional degree programs were selected—two in California, four in Illinois, and three in New York. The staff was to investigate their development and critical decision points, and also to identify the

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[1] Medsker, L., Edelstein, S., Kreplin, H., Ruyle, J., & Shea, J. *Extending opportunities for a college degree: Practice, problems, and potentials.* Berkeley: Center for Research and Development in Higher Education, University of California, Berkeley, 1975.

Medsker, L. & Edelstein, S. *Policymaking guidelines for extended degree programs: A Revision.* Washington, D.C.: American Council on Education, 1977.

individuals at institutional and system levels who are responsible for each program's direction. Those persons were to be interviewed as part of the investigation. (A list of the specific programs included in the study is in Appendix A.)

The relationship between local programs and various state-level agencies was determined. Arrangements were made to interview appropriate individuals at the state level in each of the three states. Subsequently, the staff also identified a number of individuals in several federal governmental and national professional agencies who were knowledgeable about and concerned with nontraditional degree programs. With observations in mind from previous interviews with local and state-level personnel, these individuals were then interviewed in order to attain a wider perspective on the process of decisionmaking in this arena and to identify more fully issues and problems to be dealt with in the process. In all, 100-plus interviews were held in the three states and with other individuals. (Appendix B lists all individuals from whom information and ideas were elicited.)

Generally, at least two and sometimes three of the interview team were present during the visits, which lasted an hour or more. A semistructured interview schedule was used to facilitate the sessions, however situational factors required considerable flexibility in both approach and discussion. In many instances, descriptive materials and copies of regulations or procedures were collected. These richly supplemented interview notes.

We who conducted the interviews and now submit this report must specify three limitations with respect to both our efforts and the report. First, we did not conduct a research project on decisionmaking per se, nor is the report a treatise on the subject. Such an effort was neither feasible in the contract period nor was it within the scope of our ability. We merely endeavored to find out what we could about the apparent bases for decisionmaking within the several policy areas confronting those who are involved in nontraditional degree programs. Our principal objective was to bring together a body of information which may guide the National Institute of Educaton as it contemplates evaluation studies of nontraditional programs.

Second, although we did as thorough a job as possible to determine the decisionmaking processes in the three states named earlier, we cannot claim that what we found is universally the norm. It is entirely possible, for example, that decisionmakers in other states would perceive the need for different and more complete information, or that their approval procedures would differ from those we found. On the other hand, our contacts with individuals and agencies beyond those in the three states gave us some indication that what we found was more generally reliable.

Finally, our focus was on nontraditional degree programs designed primarily for part-time adult students at the associate and baccalaureate levels. Therefore although we frequently use terms such as "nontraditional programs" or nontraditional education," either of which might suggest the broader field of adult or continuing education, our comments are still limited to the degree program component.

In the first of three chapters which follow, we report what we learned about the bases for decisionmaking, particularly the types of information used in the process. Some readers may be surprised at the degree to which pragmatism tends to predominate, others will not. Even in the most extreme cases where subjective judgment appears to be the basis for decisionmaking, there are certain elements of objectivity which underlie the subjectivity, and these are worth noting.

The second chapter deals with policy issues and types of decisions related to nontraditional degree programs that the people interviewed reported they have faced, or believe they will face in the future. In some respects, this type of information appears to be as valuable for evaluation-planning purposes as testimony on how decisions are made. We believe that at least it rounds out the information picture and alerts would-be evaluators to areas in which decisions will be made. Also, for each policy area we list in this chapter a limited number of questions that were suggested by those interviewed. They are included as indicators of the types of information that would be useful in determining the direction of nontraditional programs.

A final chapter summarizes our observations and notes certain implications for the evaluation of nontraditional programs.

We hope this report will both interest and be useful to the National Institute of Education and to other individuals and agencies as they have occasion to take stock of how objectively they make decisions concerning nontraditional degree offerings.

2. Observations about Decisions Concerning Nontraditional Programs

To say that decision processes are complex expresses a truism which applies to nontraditional degree programs. Both the programs and the three states in which we studied them vary tremendously. The interrelationships between campuses and other agencies are often intricate. In this chapter we report on what we found out about decisionmaking and information needs within the three states. Information summarized was gained from interviewees at the program, institutional, system (where applicable), and state level.

The eleven "observations" reported in the following pages are, in effect, "findings" from our survey of the nine nontraditional programs. The use of the term "observations" is deliberate, for "findings" implies a rigorous and detailed investigation that neither the time available nor our charge permitted. After presenting these observations in the first section, we briefly discuss in the second section the implications of state organization of higher education on nontraditional programs.

OBSERVATIONS

Early in our survey it became apparent that most decisions about nontraditional programs and the information needed for overall direction of them have two relatively distinct aspects: 1) the substance and content of nontraditional programs as *policy* issues, which are examined in the following chapter, and 2) procedural matters as they pertain to institutional and state operations, which are emphasized in this chapter. Although the distinction between policy and procedure is a useful device for presenting the results of our investigation, we are well aware of its limitations as an analytic tool. In neither practice nor theory, for example, is it possible to separate major procedures for the review of nontraditional programs from the policies and values of the reviewing agency. Policy is implemented through procedures and most decisions have a distinct procedural or administrative aspect.

Our observations are grouped in the following four categories:

1. Initiation and review of newly proposed nontraditional programs.
2. Governance, administration, and review of ongoing programs.
3. Budgeting nontraditional programs.
4. Coordination.

These categories are by no means mutually exclusive. Assurance of the quality of nontraditional academic programs is a factor in virtually all categories. The fit between program initiation and organizational level is not as close as we suspected. Historically, traditional academic programs have been established on the initiative of campus faculty. However, of the nine nontraditional programs in our survey, four were clearly initiated at organizational levels above the campus. Even in the programs at the two private institutions, regular faculty appear to have had a minor role in the initiation and subsequent operation of the nontraditional programs. There are

few if any ways of categorizing decisions or information about nontraditional programs that are both useful and even approximately universally correct.

INITIATION AND REVIEW OF NONTRADITIONAL PROGRAMS

We began this study with clear awareness of the importance of individual educational leaders and their educational philosophy in the establishment of nontraditional programs. The three observations in this section reflect our initial awareness of the great extent to which intuition and philosophy were substitutes for quantitative justification. Our first observation:

- *In the past, decisions to establish new nontraditional programs or institutions were generally based on philosophical or intuitive grounds rather than on existing quantitative information or on needs analyses conducted for the specific purpose.*

The attitudes of those who must approve new nontraditional programs for quality and for funding is now changing, however, and our second observation reflects these changes and their implications.

- *State fiscal and higher education agencies are becoming concerned that nontraditional programs may be established by institutions primarily to increase enrollment for budgetary purposes rather than to meet known educational needs.*

Perhaps we should not have been surprised to learn the extent to which pragmatism has until now been dominant in decisions about nontraditional programs—and, we suspect, about traditional programs as well. However, the majority of our interviewees at all levels indicated that decisions have to be made on political or philosophical bases. They said that while ,quantitative data might be helpful in backing them up, such data would be of minimum value to the chief argument for initiating or determining the direction of a program.

In five of the nine programs, we found no evidence of quantitative justification for their establishment. In three other programs, relatively routine demographic data appeared to be used to justify, not inform, decisions. Even in the one instance where a needs survey was conducted, it was not clear that it played any significant role in the final decision to propose the program. Yet, for the most part, the intuitive belief that the programs would meet educational needs has been justified. The director of a well-established nontraditional program reported that his program is the outcome of an educated guess of the institution's chief executive officer. The director discounted the value of quantitative needs analyses, noting that he knew of two states in which extensive surveys documented the need for nontraditional programs but in which such programs had yet to be established.

In the late 1960s and early 1970s, when older nontraditional programs were established, broader access to higher education through radically different modes of instruction was an objective that many educational leaders accepted without either question or objective proof. The difficulties and stringency of state funding were still largely in the future. Many of the new programs, at least in their initial stages, were primarily supported by either extramural funds or student fees. State executive and legislative fiscal agencies generally were only casually interested in the new ventures.

However, by the time of our survey in 1977, the attitudes of many senior state, institutional, and program administrators were changing. Although none were disillusioned about nontraditional education—their own programs, at least—none evinced the unqualified and unquestioning support and enthusiasm of earlieer years. Some saw state fiscal stringency as requiring closer examination of the costs and benefits of nontraditional programs. Others believed that the question of priority between education for adults and education for traditional college-age students had always been present, but was currently being highlighted by fiscal problems.

The problems were not only fiscal. Many administrators noted that nontraditional programs were serving a limited clientele—older students, who for the most part students were more highly motivated and often as well qualified academically as traditional resident students. We heard reports that earlier goals of increasing access for disadvantaged students through nontraditional education were being met only in rare instances. In one case, we were led to infer that an inner-city learning center was being maintained primarily as a political gesture despite evidence that it was more costly than its educational impact seemed to warrant. Questions of purpose and cost merged in the suspicion, largely at the state level, that some nontraditional programs were established to obtain state or federal funds.

The current impact of these changing attitudes is the increasing difficulty that must be faced by those who wish to establish new nontraditional programs. This is illustrated by the attempts of four programs that have offered baccalaureate degrees to extend their offerings to nontraditional master's degrees. In one instance a proposal is still under consideration at the program and campus levels. Questions of need based on quantitative data as well as questions of program quality are being investigated at lenght. In a second instance, a proposed master's degree was not approved by the coordinating agency because of doubts about the quality of the existing nontraditional baccaluareate program. In the two remaining instances, master's programs appear to have met with formal approval. However, the faculty in one case and the administration in the other were reportedly hesitant to implement them completely, primarily on the grounds of content and quality of the proposed offerings.

New institutions and programs are being established, but it seems clear from our survey that they are either outgrowths of existing programs, as noted above, or reorganizations of them. In two multicampus systems, nontraditional programs operated at several campuses have been clustered into newly established "campuses without walls." In one instance, the decision was supported by analysis of financial information which projected substantial savings by avoiding new facilities costs. In the other instance, the decision was based not on quantitative data but on the perceived need for greater emphasis on part-time, degree-credit education for adults. In both cases, internal personnel problems and opportunities were clearly as significant in the decision to establish the nontraditional campuses as was the educational philosophy behind the programs.

In all three states, relatively broad and quantitatively oriented studies of statewide needs for nontraditional education have either been recently completed or were underway at the time of our study. In two instances, the studies were undertaken with the explicit purpose of providing background for the coordination and expected growth of nontraditional programs. Our impression is that such studies or others similar to them will play a critical role in future deliberations and decisions on the establishment of new nontraditional programs:

- *In the past, review of new nontraditional programs has not differed in general from review of traditional programs, but it appears that in the future information which is specifically relevant to nontraditional programs will be required and used for their evaluation.*

Until recently, coordinating agencies in the three states in the survey were concerned primarily with the initial approval of an academic program at a particular campus, and were not concerned with subsequent offerings of that program at an off-campus location. Yet it is at the off-campus locations that the issue of unnecessary duplication of a popular program—business administration, for example—most often arises. In all three states, recent changes in review procedures are intended to address this issue and to obtain information considered necessary for the review decision. For example, a study of off-campus programs by a coordinating agency resulted in the following recommendation:

> If a public university offers, or intends to offer, a program at an off-campus location, the university must receive program approval from the [coordinating agency] for that location. Program approval is required if a student can obtain the minimum number of credit hours necessary to complete the program major for a degree at the off-campus location. Public universities should submit all existing or proposed programs meeting this criterion to the [coordinating agency].

The exact responsibilities of the review agencies do not appear to have reached final definition in any of the three states. This lack of definition is particularly apparent in the case of coordinating bodies, but is also present in multicampus systems and intermediate community college coordinating boards. Reasons for this lack of definition are clear. Application of the usual criteria—capacity to offer the program, and its appropriateness to the campus mission—is no longer adequate. Questions of location and of the relationship of the proposed program to those of other institutions at that location must be answered. Although high-cost, highly specialized graduate programs have presented similar issues in the past, virtually every new program that will be offered off-campus is now in the arena. The line between desirable competition and unnecessary duplication is never easy to draw. It becomes more difficult to discern when, as in many instances, it lies between the public and private sectors.

Review decisions can raise quite subtle problems as discussion among the staff of one coordinating agency during our visit illustrates. All agreed that the

primary purpose of agency review was to assure educational quality within stated campus missions. All also agreed that program location was a policy issue that should be resolved by the coordinating agency. But should the coordinating agency also be concerned with the mode of instruction? Some thought that mode of instruction was integrally related to the policy issues of either quality or location, or both. Others were convinced that the mode of instruction was clearly an institutional and faculty prerogative.

Information is likely to play little part in resolving the appropriate policy stance for the coordinating agency in the illustration above. Nonetheless, coordinating agencies will have to adopt some policy stance. When they do the policy will probably be supported by procedures for review of newly proposed nontraditional programs that specifically seek information concerning the distinctive operational features of these programs. These features raise equally difficult issues for both governance and administration.

GOVERNANCE, ADMINISTRATION, AND ONGOING PROGRAM REVIEW

When a nontraditional program has been reviewed and is in place, it generally becomes subject to the rules and procedures applicable to all academic programs and personnel. Decisions which may seem routine for on-campus administration can be critical for nontraditional programs. In at least three instances, we became aware of the logistical problems of providing student services at off-campus locations or after hours on campus. Our three observations in the present section stress the relationships between traditional and nontraditional programs in three areas: 1) information used for ongoing program review, 2) substantive relationship between the two types of programs, and 3) implications of the two types of programs for faculty personnel. Regarding information for ongoing program review, we observe:

- *Monitoring and review of existing nontraditional programs makes less use of explicit evaluative procedures based on quantitative information than of those based on qualitative information derived from formal or informal peer review.*

Even within traditional higher education, the systematic and periodic review of existing academic programs is a recent phenomenon. To date, for nontraditional programs, the precise responsibilities of campuses, multicampus systems, and coordinating agencies do not appear to have been spelled out with finality in any of the three states in our survey. With only one exception, it appeared that existing program review of both nontraditional and traditional programs relied on routinely collected quantitative information largely required for budgeting and resource allocation. In several cases we were told that class-size data raised questions concerning program viability in the nontraditional area just as in more traditional situations. In another instance, an unusually large increase in number of full-time students entitled to student financial aid caused a coordinating agency to review a particular nontraditional program in detail.

The apparent absence of interest in information directly related to nontraditional programs seemed to be epitomized in a centrally supervised multicampus program that existed on several campuses. For some three or four years, faculty at each campus had been individually assessing prior learning and experience for credit as part of a systemwide nontraditional degree program. Only at the time of our visit, however, was an attempt being made to collect available information to evaluate the consistency of assessments across the campuses.

The exception to general reliance on information generated through traditionally oriented information systems was found in a relatively small program in which a deliberate attempt had been made to specify, collect, and analyze relevant data from the inception of the program. In part, this effort reflected the individual interests and educational philosophy of the program director; in part it was undertaken in anticipation of regional accreditation requirements. Wholly aside from accreditation, the information was being analyzed at the time of our study to help determine whether a new off-campus learning center should be established and, if so, where it should be located.

Our second observation relevant to ongoing program review concerns substantive relationships between nontraditional and traditional programs:

- *Whether and how an institution's off-campus programs should be integrated within existing on-campus offerings are questions which are relevant to evaluation, but which cannot be answered solely by reliance on traditional measures of program activity.*

The relationship between off-campus programs and programs conducted on campus has at least two

aspects: First, the nontraditional programs offered may be closely related to on-campus instruction in the sense that credit for prior learning may be regularly combined with required traditional classroom instruction as the basis for a nontraditional degree. Second, the off-campus program may be related to on-campus instruction in the sense that it is an extension of the on-campus offering developed by the regular faculty, even though there may be no overlap between regular students and faculty and those in the off-campus program. Issues of the relationship of off-campus to on-campus programs are of course not found on campuses such as Empire State College or Coastline Community College, where conventional, on-campus instruction is not offered.

Decisions relating to requirements of on-campus classroom instruction as part of nontraditional off-campus programs are primarily internal, and are in integral part of the specific objectives of the particular nontraditional program. The decision to integrate off-campus and on-campus programs is one which arises at the inception of a nontraditional program. There was one instance, however, where the growth of a nontraditional evening program was such that the academic plans of the institution were being altered so that a full range of traditional offerings would be available in the evenings to accommodate students originally recruited through the nontraditional effort.

Where nontraditional programs are integrated with regular campus offerings, serious and sustained efforts must be made to communicate the program details to regular faculty members who have responsibility for students in the nontraditional program. Lack of such communication was illustrated in one institution at which the regular faculty members over a period of years believed that students in the nontraditional program were given credit toward a degree through proficiency examinations. In fact, such credit was not given; the proficiency examinations were used solely for guidance and diagnostic purposes.

The second aspect of the relationship between nontraditional and traditional programs is more troublesome and poses a possible criterion for program evaluation. To what extent should off-campus programs, in effect, be a mirror image of those offered on campus? One point of view is clearly represented by a coordinating agency that considers the existence of such a relationship a primary indication of continuing program quality. An opposing point of view was that of a program director in another state who considered his well-established program as one with almost no relationship to on-campus instruction, and one, indeed, beyond the purview of regular faculty interest or control. Spokesmen for both sides would doubtless agree that the ultimate criterion of value for off-campus programs would be the extent to which they served student needs. To date, this criterion has escaped direct measurement. A coordinating agency with many other concerns and some distance from the operation must find substitutes for this ultimate criterion, one of which may be a clearly defined connection between established on-campus programs and those newly offered off-campus. At the program level, on the other hand, such proxies are less useful. Student satisfaction and subsequent employment experience are, informally at least, continuing sources of information for evaluation.

Among the most critical decisions are those relating to instructional staff capabilities, and our third observation concerns faculty members:

- *Institutional and program administrators are aware of internal pressures to shift tenured faculty from traditional programs with declining enrollment to nontraditional programs where enrollment is stable or growing. To date, these pressures have been resisted.*

This aspect of the relationship of nontraditional programs to more traditional offerings arose during our investigation as a result of reported problems of relocating faculty within institutions. For example, in one institution departmental faculty were urging that one of their tenured members be reassigned to the nontraditional program. Changing student interests and degree requirement modifications had left a language professor with tenure but without students. Both the program director and chief campus executive officer stated that this type of relocation would not be permitted, but we inferred that the decision would have been less clearly defined had the qualifications of the particular faculty member been more compatible with the needs of the nontraditional program.

Another facet of faculty relocation arose as a concern at a campus which is making conscious efforts to recruit and retain faculty who would pursue their disciplinary specializations, hold appointments and teach in regular departments, and still put in a term of service with the campus' well-established nontraditional program. The concern is that younger faculty with specific interests in nontraditional education might lose contact with their discipline and,

lacking such contact, also lose mobility in the job market.

The setting of most nontraditional programs is in larger institutions or multicampus systems which have their major responsibility and emphasis in traditional education. Currently, routine governing and administrative decisions for nontraditional progrmas are usually based on quantitative information from systems designed for traditional education. That is, they are so based if quantitative information is used at all. More attention will undoubtedly be given to these data in routine management practices as experience is gained with nontraditional programs and the types of information relevant to them. Such impetus for the development of relevant data and data categories will no doubt come from state fiscal agencies.

FUNDING AND BUDGETING NONTRADITIONAL PROGRAMS

Formulas or guidelines for determining state support for higher education have had a long and somewhat checkered past. To a greater or lesser extent, most states still use student credit hours, student contact hours, full-time-equivalent students and faculty, or similar measures in their budgetary decision processes. In general, nontraditional programs are too new and too varied to be part of the mainstream of budgetary information, and our two observations in this section reflect that isolation:

- *At the statewide level, fiscal and educational administrators responsible for budgetary decisions are aware that routinely collected information to support decisions about traditional programs is not adequate for decisions about such programs. The development of budgetary measures for nontraditional programs is currently in its very initial stages.*
- *In part because of the general inapplicability of usual budgetary measures, and in part because of state revenue constraints, budgetary decisions at all levels about nontraditional programs appear to be more closely related to qualitative policy and program factors than is the case with budgetary decisions concerning traditional programs.*

Of the wide variety of budgetary decisions and issues encountered in the spring of 1977, two are particularly relevant to our observations: fiscal retrenchment, and the special costs and expenditures of nontraditional programs.

Fiscal Retrenchment. Although a nationwide concern over the past two or three years, fiscal retrenchment appears to have had relatively little direct impact on the nine nontraditional programs and institutions in our study. Two programs were required to adjust to reduced support. In both instances the information available to guide the budgetary adjustment was less than desirable.

In the first instance, ad hoc analysis of existing cost data was sufficient to produce unit-cost figures which satisfied higher authorities that the nontraditional program was more economical than the institution's traditional programs. As a result, the nontraditional program received a proportionately smaller decrease than other budgetary units. The responsible administrator stated that the cost data had been developed in haste and "off the top" of his head, adding that he didn't know where to look for assistance in this costing exercise. Since the program was in its first year, the ad hoc approach is understandable. Certainly, the result was satisfactory from the point of view of the program.

In the second instance of fiscal retrenchment, however, not only had the program been in existence for a number of years but it was supported by an extensive research effort. Although the needed information for retrenchment decisions was ultimately available, substantial delay was reported in obtaining it. The institutional research and information effort was conceded to be of substantial value to the program in its external relations, but had not been directed to assist in internal budgetary decisions. From these and other examples, we suggest that cost data relevant to budgetary decisions in nontraditional education are unlikely to be developed at the program level unless such data are required by another organization.

Special Costs. The peculiarities in costing nontraditional programs raise almost endless difficulties for budget professionals. Rental of off-campus facilities inflates operating budgets, but gives an unrealistic picture of actual use of facilities. Part-time or adjunct faculty are less costly, but using these lower costs in statewide average costs may alarm institutions which must rely primarily on full-time faculty. In one state, the budgetary classification of part-time faculty salaries as "supplies and expenses" rather than as "personal services" is said to have confused an inexperienced budget examiner.

Costing peculiarities remove nontraditional programs from routine formulas, guidelines, or con-

venient rules of thumb, and these programs not only invite but almost demand individual attention from state fiscal agencies. In one state this attention took the form of state budget examiners observing faculty activity during assessment of prior learning. In another state, a state fiscal agency imposed its own admittedly more or less arbitrary definition of "learning centers" on the institutions. The responsible state administrator said he was not particularly proud of his definition, but that some definition was required and the higher education community seemed unable to agree on one.

On the whole, despite understandable wariness between state budget professionals and the administrators of nontraditional programs, relations among them appear constructive. As in other areas of state and higher education relations, considerable mutual trust and confidence are required. In one state, for example, quite similar nontraditional programs had very different experiences in their attempts to fit the square pegs of nontraditional education into the round holes of traditionally oriented statewide information structures. One program director resolved the problem with little difficulty, but the other did not complete the task without substantial effort, including an appeal from the decision of the statewide staff to the coordinating board itself. Reportedly, the difficulties of this second program were attributable almost entirely to distrust of the statewide agency, not to technical data issues.

Although state executives and legislative fiscal staffs may be unfamiliar with nontraditional educational methods and procedures, they appear to understand the basic program objectives. They are aware of the difficulty of quantifying information about nontraditional programs, but they also seem determined that these difficulties will be overcome. On their part, administrators of nontraditional programs are aware that budget professionals and the state budgetary processes require both quantification and simplification for presentation of nontraditional educational activity. But as of late spring 1977, despite mutual understanding, useful quantification of information about nontraditional programs for budgetary decisions is still quite far in the future.

COORDINATION

Although statewide coordinating agencies for postsecondary education vary widely in authority and responsibilities, it is our perception that most are being asked, or told, to assume increasing control over academic program quality and distribution. As this occurs, it is also becoming apparent that regulations, guidelines, and information procedures developed for traditional academic programs may not be adequate for nontraditional ones.

California, Illinois, and New York have quite different statewide coordinating structures for higher education, which we detail later in this chapter. The differing formal structures raise differing technical and policy questions for state-level decision, and they can also imply differences in available information. Two of our three observations in this section address common concerns over program distribution and quality control. A third addresses an apparent absence of concern about program impact. The first two observations are:

- *Competition between public and private higher education and within each sector is increasing as nontraditional programs extend beyond past geographic boundaries. Existing statewide information systems generally do not adequately portray the influence of this competition.*
- *State higher education agencies foresee increasing difficulty in maintaining control over the quality of nontraditional programs as these are established to replace students lost as the college-age population declines. Currently, these agencies foresee continuing reliance on peer review rather than on routinely collected quantitative information for quality control.*

Few would disagree with the proposition that higher education has benefited from both the diversity of institutions and programs, and from the creative competition among them. In traditional higher education, this competition has generally been contained and controlled by a number of factors: geographically separated campuses rarely competed for the same students; although admissions standards varied, the campuses generally did not compete except above a widely accepted threshold of formal qualifications; and the quality of traditional academic programs was visible to and controlled by faculty peers.

Nontraditional education can increase competition because it reduces the impact of each of these previously limiting factors: The location of the campus gives way to ubiquitous sites for off-campus instruction; qualifications for admission tend to be unique to each program—the lower limit being a single individual's suitability to the specific program; and traditional residential faculty may have little

knowledge or even concern about the operation of nontraditional programs in distant communities.

The diminishing importance of the limits on competition places a new and largely unsought burden on statewide coordinating agencies. Policies and procedures developed from experience with traditional programs are rarely adequate to meet the new challenge of monitoring the distribution and quality of nontraditional ones. In each of the three states, the coordinating agencies, as noted earlier, were revising procedures for the review of newly proposed nontraditional programs. On the other hand, the question of how existing nontraditional programs would be reviewed met with varying responses. In one state the question was yet to be answered, but in the other two the coordinating agencies appeared to be taking positions at opposite ends of a spectrum of control.

Coordinating agency staff in one state clearly intended to move toward more central mechanisms for quality control of nontraditional programs. In the past it had exercised substantially greater quality control over traditional programs that had such agencies in other states, and there appeared to be little doubt that it had both the authority and intent to expand its activities to the nontraditional area. In contrast, the coordinating agency in the second state was concentrating on controlling the quality and location of new nontraditional programs. It was expressly taking a wait-and-see approach to reviewing the quality of continuing programs. In general, the attitude of this coordinating agency was that institutions could be relied upon to correct deficiencies in quality before the "outer limits" of unnecessary duplication or poor quality were reached.

To the extent that quantitative information is relevant to quality control, it will generally be supplied by information systems which are built on such traditional measures as student credit hours and student-faculty ratios. Such measures may not accurately portray nontraditional program activity. Historically, a student in class for one hour earns one credit hour toward graduation, and this is still the general rule in traditional residential study. But in many nontraditional programs a classroom or contact hour is not a true measure of the effort of either student or teacher; classroom work or contact experience is supplemented by more extensive outside preparation, study, and evaluation than is customary in traditional instruction.

The gross quantitative data on the relationship between contact hours and credit hours remains useful information about nontraditional programs when it is analyzed for the purpose of raising questions, not answering them. For example, one state agency responsible for administering student financial aid noted a sudden and unusually large increase in the number of full-time students enrolled in a small campus. Investigation by that agency revealed a substantial and, as subsequently determined by the coordinating agency, unjustified discrepancy between contact hours and credit hours awarded to qualify the students for aid as full-time students. The sudden increase arose almost entirely in off-campus programs conducted with little or no participation by regular faculty, and the coordinating agency required remedial action.

In many states, including two in our study, student financial aid may be administered by one state agency and institutional aid by another. The differing policy objectives and implementing procedures intersect in the need for common or compatible definitions of the information on which state support is determined. If financial aid is given to part-time students, for example, should financial aid to institutions be based on actual numbers of part-time students or on aggregated full-time-equivalent computations? Although the issues differ with specific procedures in each state, it was not clear to us that the implications of the need for compatible information were fully realized.

In two states the coordinating agencies had sufficient quantitative data so that at least in one instance in each state such data raised questions about the quality of nontraditional programs. However, such data served the primary purpose of budgetary review and distribution of student and institutional financial aid. In both states the agencies believed that quantitative data would not play a major role in the evaluation of continuing nontraditional programs. In the one state in which such evaluation was clearly intended, on-site peer review was foreseen as the most probable quality control mechanism. In the state in which there was less probability of formal evaluation, the coordinating agency staff believed they could rely primarily on quality control mechanisms at the campuses to monitor the "outer limits" of quality. To a lesser extent, their own experiences and specialized knowledge of the state's higher education would also be used.

Our third observation pertains to the apparent lack of concern about the influence of nontraditonal programs on other programs and institutions.

- *Within state and multicampus systems, the impact of nontraditional programs on traditional campuses and programs does not appear to have been systematically investigated.*

Quality control is a major and, in some states, perhaps urgent question which has had consideration in all three of the states we visited. Less attention appears to have been given to a question which, if less urgent, is nevertheless important: What impact do statewide or multicampus nontraditional programs have on traditional campuses? In one state, for example, a senior administrator suggested that "while there's no data" the number of independent study programs had increased at all campuses throughout the system under the influence of major off-campus programs at only a few locations. We suggest that coordinating agencies and multicampus systems should give consideration to collecting data that would provide information on the extent of impact nontraditional programs have not only on students but on the institutions. The extent to which traditional residential campuses adopt nontraditional modes of instruction or procedures for awarding credit may be a better indication of the future than formal statements of objectives.

Because time, talent, and resources are in short supply, a decision to encourage institutionally based nontraditional programs may well preclude the establishment, for example, of a free-standing "campus without walls." Undoubtedly, such decisions will continue to be guided primarily by educational philosophy, intuition, and state and academic political factors. Nevertheless, more adequate information about the differential impact, of, for example, Empire State College—a free-standing campus—on the one hand, and the largely institutionally based programs of the California State University and Colleges on the other, would appear valuable over the longer term.

THE STATEWIDE CONTEXT: IMPRESSIONS

In all 50 states, statewide fiscal and higher education agencies must respond to a full range of questions about nontraditional education that are raised by our observations. Their decisions, as well as the information on which those decisions are based, will vary with the formal structures and information relationships in each state. The three states in our study illustrate the diversity of state contexts, but neither represent nor were intended to represent the full range of diversity among the 50 states.

Our observations are set in the context of our impressions of the three states in which the nine programs in the survey were located. Our impressions do not derive from their formal structures alone but also from what we heard and saw of informal structures along but also from what we heard and saw of informal relationships. The formal structures are detailed in Appendix C. In the following paragraphs we give our impressions of how formal authority and informal influences blend to give to each state an ambience which is difficult to describe in detail, but helpful in understanding the decision processes we were investigating.

In California, the California Postsecondary Education Commission (CPEC) is an advisory coordinating agency. CPEC is less influential in California than are the coordinating agencies in Illinois and New York. For the most part, major decisions about nontraditional programs are made within the two four-year college and university systems or by locally-controlled two-year college districts. Information used by CPEC and other state-level agencies is generally not developed by the state but by the four-year systems or local two-year districts. An intermediate coordinating board for the two-year colleges is emerging as a source of statewide information, and may be gaining influence relative to the local two-year boards. The attitude at the state level toward nontraditional education appears to be neutral, or perhaps apathetic, when compared with those in Illinois and New York. Statewide information systems are developing in California, but they are not yet an integral part of budgetary or planning processes. Aside from the imposition of budgetary limits, there does not appear to be any inclination on the part of state-level agencies to actively discourage institutional initiatives in nontraditional education.

In Illinois, postsecondary education is coordinated by the Illinois Board of Higher Education (IBHE), a regulatory coordinating agency with authority to approve and disapprove academic programs. It coordinates four four-year college and university systems and an intermediate coordinating board for the two-year campuses. IBHE is relatively strong, in part because of formal statutory authority but in large part because of its ability to get informal consensus from within higher education on its annual budget recommendations to the state fiscal agencies. IBHE views "tolerance" of institutional initiatives as a positive aspect of its coordinating role. IBHE similarly views a state-supported fund which it administers to encourage nontraditional programs, innova-

tion, and cooperation among institutions. A statewide information system exists and is considered integral to IBHE's planning and budgeting processes.

In New York, postsecondary education is coordinated by the Board of Regents of the University of the State of New York, a regulatory coordinating agency with unique authority to approve and disapprove academic programs in the private as well as public sector. The Regents are also responsible for elementary and secondary education. The Regents and other state-level agencies appear to have a more active interest in nontraditional programs than their counterparts in California and Illinois. There appeared to be greater concern about the quality of nontraditional programs, in part perhaps because of the extensive formal authority of the Regents. As in Illinois, but not in California, statewide information systems developed for the administration of institutional and student financial aid also provide data relevant to decisions concerning nontraditional programs.

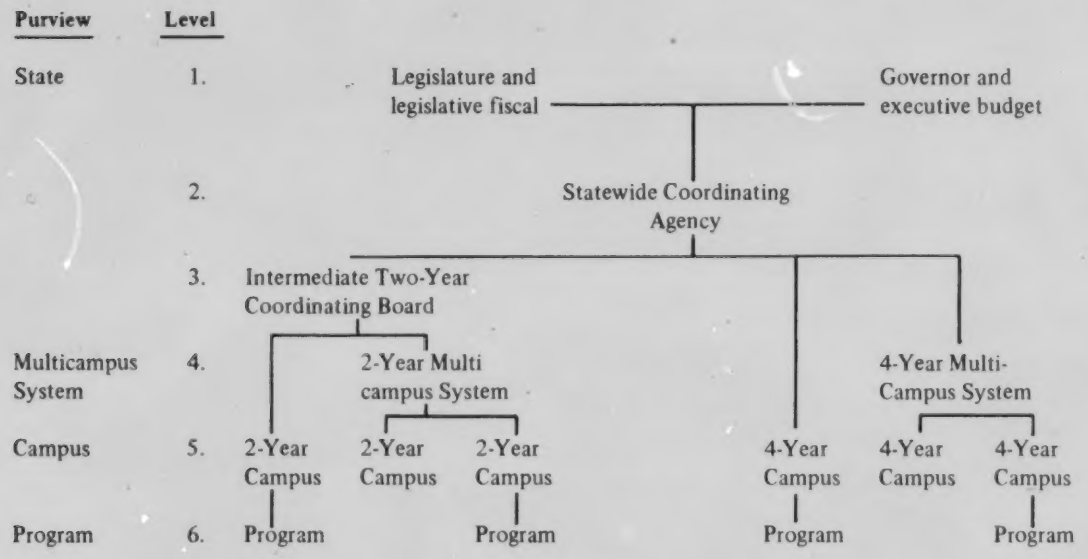
California, Illinois, and New York are not, as we have said, representative states; but as illustrations of the diversity that exists across the 50 states they clearly warn of limitations on the use of data collected nationally. There is incredible diversity among the states, and even more diversity in the nontraditional programs they support. At the national level it should be recognized that, to a great extent, program diversity is attributable to state and community settings, educational philosophy and personality of their leaders, and often subtle and inarticulate working relationships between state agencies and institutional officers.

ORGANIZATIONAL LEVELS AND INTERRELATIONSHIPS

Decisions about nontraditional programs occur at every organizational level, and activity at any one level varies both within the state organization for postsecondary education and the particular decision. Chart 1 suggests six organization levels in schematic form, but it is extremely difficult to generalize. For example, in New York State the Regents' External Degree Program is operated directly by the coordinating agency, not by a campus. In many respects, Empire State College is both a program and a campus, and its geographically separated learning centers are an organizational level not represented on Chart 1.

Chart 1

Schematic Organization Chart: Organizational Levels



An example of interrelationships among agencies and the differing perspectives of administrators at three organization levels is found in the recently established Chicago City-Wide College, a "campus without walls", in the two-year multicampus Chicago City Colleges District.

Until Chicago City-Wide College was established in late 1976, off-campus degree-credit programs were the responsibility of the seven campuses in the district, although the 1974 district master plan had recommended stronger central coordination of such programs. By late 1975 the district governing board and the administration realized that a separate administrative unit—ultimately Chicago City-Wide College—was necessary to achieve the greater flexibility and coordination envisioned by the master plan. Within its own complex internal decisionmaking procedures, arrangements were made to establish a new unit. However, the new college unit required approval by the Illinois Community College Board, the intermediate statewide coordinating agency for two-year colleges, and the Illinois Board of Higher Education which is the statewide coordinating agency for all higher education.

Under the then existing regulations of the two state agencies, programs approved for a specific campus of the Chicago City Colleges District could not be offered by another campus in the district without formal approval by the *full board* of each agency.

These review and approval procedures were perceived as restrictive by officers of the Chicago City Colleges District. Formal approval had already been obtained for programs at one or more conventional campuses. The objective of greater flexibility would be delayed if formal board hearings and procedures were required. Substantial information requirements were perceived to be unduly burdensome under the circumstances. Finally, and outreaching other considerations, the district is a multicampus system and responsibility for the programs is theoretically in the district governing board.

None the less, both state agencies exercised their prerogatives, although within each of them questions arose as to who should make decisions. The Illinois Community College Board decided that its review responsibilities *did not* require full board approval of programs at one campus when there had been prior approval for another campus in the multicampus system. So, early in 1977 its regulations were amended to permit staff approval under most circumstances. The staff of the Board of Higher Education decided that its responsibilities required that program location—even within a multicampus district—should remain a policy issue for resolution by the full board, not by staff alone.

Speculation on the reasons for different responses to Chicago's problems, and to approval of nontraditional approaches in general, is just that. It is possible that the Illinois Community College Board was more willing to rely on its staff because both board and staff had closer working relationships with the two-year campuses than did the Board of Higher Education. The staff of the Board of Higher Education, on the other hand, may have been influenced by a related matter before it. At the time the issue arose, it was in the process of strengthening its regulation of off-campus programs of four-year campuses. Its reluctance to allow staff approval in this particular two-year campus situation may have stemmed from concern that its action would be perceived as inconsistent with its position regarding four-year campuses.

3. Problems and Issues: Implications for Evaluation

In this chapter we report what our interviews revealed about the perceived problems and issues pertaining to nontraditional degree programs and the implications they have for evaluation studies. As indicated in Chapter II, it is not easy to distinguish between matters of substantive policy and decisions that are primarily procedural in nature. However, we believe it is important to emphasize what interviewees at local, state, and federal levels have pinpointed as major problems, for surely the task of evaluation will revolve around these matters.

At the outset, we decided to group the problems and issues as we learned about them around four of the policy issue areas that were identified in the Center's previous research on the topic, namely: 1) program quality and effectiveness,, 2) financing, 3) clientele, and 4) organization and impact.[2] It was no surprise to find that persons in the field identified problems and questions that easily fell within these four classifications.

From our conversations, we obtained ideas not only on the general problems and issues but also on the relevant questions that should be asked and answered as attempts are made to assess the direction of nontraditional degree programs. As context for the questions suggested in each of the four policy areas and their relevance to evaluation, we first discuss the general issues. The questions themselves are then listed and discussed briefly.

PROGRAM QUALITY AND EFFECTIVENESS

Of all the problems and issues discussed in our interviews, none received more attention and concern than those relating to program quality and effectiveness. Indeed, we were struck by what appeared to be a sense of urgency at all levels–institutional, state, and federal–for mechanisms, criteria, and procedures to assess and assure the quality of nontraditional degree education. State officials in two states even suggested that nontraditional education would suffer a serious decline in credibility if questions of quality were not dealt with in the near future.

As mentioned in the previous chapter, systematic appraisals of existing academic programs by institutions and state agencies is a relatively recent development in higher education, partly because of scarce resources. On the other hand, concern over the quality of non-traditional degree programs does not appear to stem alone from a need for funding priorities, since many programs are self-supporting.

The interest of state officials in the quality of nontraditional degree programs appears to come from two primary sources: 1) a concern for the proliferation of nontraditional programs, especially off-campus programs, and 2) pressures for increased state oversight by agencies and organizations responsible for distributing student assistance funds. As both the number and variety of nontraditional programs have increased, various agencies responsible for student

[2] Medsker, L., & Edelstein S. *Policymaking guidelines for extended degree programs: A revision.* Washington, D.C.: American Council on Education, 1977.

assistance have raised questions about specific program practices and the apparent inability or unwillingness of institutions and voluntary accrediting bodies to assure adequate quality controls.

For example, in the previous chapter we referred to questions raised by the New York State Higher Education Assistance Corporation that prompted intensive investigations of several nontraditional programs by the state's coordinating agency. At the federal level, the Defense Department and Veteran's Administration, both of which provide education funds to students who are extensive users of off-campus and other nontraditional degree programs, have been vocal in expressing their concerns about the quality of some nontraditional programs. In the case of the Veteran's Administration, this concern has resulted in the promulgation of a controversial set of regulations that tighten controls over the use of VA education funds, and in essence place restrictions on the kinds of degree programs that are eligible to receive GI benefits. Several of the programs included in this study have been affected by these regulations and are in the process of appealing adverse rulings.

Institutional administrators and program staff in our survey were as concerned about questions of quality and effectiveness as were state officials. They were interested in protecting the integrity and credibility of their own programs from so-called degree-mill operations. Several persons recognized the impending credibility crisis and the pressures for increased oversight by extrainstitutional bodies at both state and federal levels. However, they appeared to be more willing to allow competitive forces and market mechanisms to weed out low-quality programs than were state officials. On the whole, program staff and institutional administrators were primarily concerned with improving particular program features, decreasing the dropout rate, and better serving students with different educational backgrounds and educational interests.

Evaluating the quality of nontraditional degree programs is inextricably tied to decisions about standards and criteria that should be used in the evaluation process. Nontraditional programs run the gamut from extensions of existing on-campus curricula to off-campus locations, to programs that have little in common with counterparts on campus either in content, methods of delivery, or ways to measure learning. Thus evaluation criteria for them may differ from those for traditional programs. Throughout the interviews we were reminded by several program officials that while nontraditional programs were established to meet the needs of persons with specific problems of access to conventional higher education, many were also designed with a strong philosophical orientation about the nature and purpose of education and how it should be delivered. They contended that since nontraditional programs may differ markedly from traditional degree programs, direct comparisons are difficult and may void the use of traditional standards and mechanisms for quality control.

The nine programs in this study illustrate the variations that can be found among nontraditional programs, and between these and traditional degree programs. Some structure their degree requirements around measures other than the standard credit-hour unit. For example, De Paul's School of New Learning structures its curriculum around accomplishments in five competency areas, while Empire State College specifies its degree requirements in terms of the successful completion of a specified number of coordinated learning contracts. Neither Coastline Community College nor the De Paul program has any full-time faculty of its own; each program uses part-time instructional staff who may or may not have traditional academic credentials. The Regents External Degree Program does not offer instruction; it serves as a validating and credentialing agency, evaluating educational achievements obtained through formal and informal means or by demonstration of subject-area mastery through successful performance on specially prepared examinations. Several programs examined in our field work award substantial amounts of credit for experiential learning. The Board of Governors BA program requires only that students complete a minimum of 15 credit hours at any one of the five Board of Governors campuses to receive its degree, with the possibility that the remaining credit may come from an evaluation of prior learning or from additional coursework.

This diversity suggests that a major barrier to evaluation lies in determining the criteria that can be applied either specifically to individual programs or more broadly to a wide range of programs. Standard measures and traditional quality control mechanisms—such as credit hours completed, contact hour specifications, qualification of faculty, degree of faculty control and review, or availability of library facilities and other learning resources—have limited applicability or must be redefined when applied to certain nontraditional degree programs. The Council on Postsecondary Education Accreditation, in response to the difficulties faced by its affiliated

members in dealing with nontraditional programs, has recently undertaken a special study to develop evaluation criteria for the accreditation of nontraditional education.

The quality control difficulties of both state and federal agencies are further compounded when standard credit-hour measures are found in statutes and administrative codes, which leave little room for flexible interpretations or adjustments. One federal official observed that government regulations are usually not directed toward the content of the degree program as much as they are toward the form of the program and the way it is delivered. Generally, any deviation from traditional credit-hour coursework formats can make it difficult for a program to be eligible for federal funds. This is of particular concern to such federal agencies as the Office of Education's Division of Institutional Eligibility and Accreditation (which is responsible for determining eligibility for federal education funds) and the Veteran's Administration.

Some program officials, particularly those with less conventional programs, expressed concern that the increased pressures would force agencies responsible for program review to fall back on traditional measures, thus jeopardizing the integrity of the programs. Such concerns were also expressed in interviews with state officials, accrediting association personnel, and federal agency staff members who themselves were grappling with the development of suitable criteria and quality measures that would not penalize nontraditional degree programs. One person who knew about these matters in states other than those we visited described the situation as a "battleground"–a jungle of competing institutional, state, accreditation, and federal interests, all vying for influence over the development of quality measures, standards, and evaluation procedures.

In the absence of acceptable and available quality criteria, it is not surprising that many persons expressed interest in new measures for program effectiveness based on information collected from and about students. Particular interest was expressed in information about program graduates and in so-called "value added" measures of impact.

In addition, it was suggested that evaluation focus on the process by which students complete their programs. Particular attention should be given to collecting information that would identify the points or stages in degree programs at which students seem to experience difficulties. For example, at what stages in the degree process (preadmissions counseling, admission, orientation, etc.) are students most likely to drop out, and for what reasons?

Some programs we visited were already making such analyses of their students. Even so, several persons were skeptical if such studies could be conducted with the degree of scope and rigor that would be required to demonstrate the relationship between program quality and its effects on students. Program staff in particular expressed frustration and disappointment over their attempts to evaluate the effects of their programs on students. While their own research efforts could produce reasonably good information on the characteristics of students who enrolled, on program dropouts, student satisfication, and data on what happened to students after graduation, they had no idea how much or how well students enrolled in the programs learn. The absence of research tools, and an inadequate theory of adult development and learning, made such attempts both frustrating and fruitless.

There appeared to be general agreement among program staffs that no single approach or program design could meet the needs of all potential students. Many officials stressed the importance of maximum flexibility in both content and methods of delivery in order to reach the largest possible student audience; consequently, several programs were in the process of developing new components to supplement and augment original program features. To varying degrees, several programs expressed interest in technology as a means of expanding delivery capabilities. In fact, over half the programs visited were in the process of developing, or were already making extensive use of technology related instruction.

Two programs–Coastline Community College and Chicago City-Wide College–operate extensive credit programs through educational television channels. The Chicago TV College, now part of City-Wide College, is the oldest such program in the country. Plans were also underway in other programs to develop or incorporate educational technology into non-traditional programs. Empire State College is now exploring the possibility of adapting British Open University materials for use through the New York State Educational TV network. Similarly, the Illinois Board of Higher Education, in cooperation with the Chicago TV College, is preparing to initiate a statewide TV network. The California State University and Colleges has recently completed a major feasibility study of the need for a statewide TV program, to be operated under the auspices of its consortium. And finally, the Bachelor of General

Studies Program at Roosevelt is in the final stages of a three-year special project to develop self-pacing, audio-cassette instructional materials that parallel its curricular format and allow students to alternate on-campus BGS coursework with independent study options.

In terms of evaluation information, many are primarily interested in the relative costs and benefits of maintaining and developing self-paced and technology-related instructional delivery capabilities. More specifically, what skills and organizational arrangements are required in order to develop these capabilities, and which students are best served through these mechnisms? BGS officials at Roosevelt greatly overestimated the interest and capability of their faculty to produce self-paced materials, and a pilot test showed that the program appealed to only a marginal number of students. (They did admit, however, that three long years was not a long enough period of time to make any definite judgment of the value or merit of the program.)

For both technical and financial reasons, the program staffs at Coastline and Chicago agreed that future efforts in the development of TV courses should be a cooperative venture among several institutions. Such collaboration was already underway between Coastline and Chicago, as well as among several others across the country. These staffs doubted whether degree program delivered through TV programming would be successful without also providing classroom coursework or other traditional delivery methods since few students complete a degree program solely through credit from television courses. In fact, it was suggested that television courses had their greatest impact in stimulating student interest for more traditional education activities, credit and noncredit. Several persons suggested that TV programs should be examined for their impact on educational participation rates and on stimulating the development of alternative educational opportunities.

Suggested Information Needs and Questions

Expressed or implied in our conversations with persons at all levels was the need for specific information that would be helpful in a review of program quality and effectiveness. The questions that follow were suggested by the persons interviewed. They are necessarily general and do not include all the possible questions that might be asked but rather are a summary of the information needs that were expressed during the survey.

- How well do different programs respond to the needs of students with different backgrounds and characteristics, such as previous educational experience, socioeconomic status, occupation and career interests, goals, and objectives?
- What are the patterns of attrition, transfer, and completion of students in nontraditional degree programs?
- What are the characteristics of students who drop out or transfer to alternative programs?
- What are the characteristics of students who complete a nontraditional degree program?
- What difficulties do students experience in transferring from one nontraditional program to another, from a nontraditional to a traditional program, or in continuing their studies at a higher degree level?
- What factors affect the completion rate of students? What is the relationship between program completion and availability of student services?
- At what stages in a degree program (admission, orientation, assessment of prior learning, development of the degree program, mastery of the content) do students experience the most difficulty?
- What is the value of the degree to the individual as measured in terms of student satisfaction; acquisition of skills and knowledge; career advancement and mobility; increased earnings or earning potential; interest in cultural, civic, or political affairs; participation in further educational activities?
- What is the impact of introducing educational technology options into existing degree programs, such as their effect on program costs and in their method of development? How do these options compare with other program options in attracting students with different characteristics and backgrounds?

The extent to which quantitative data can or will be collected to measure the effectiveness of programs is a matter of conjecture. Some are now being collected for individual programs, but seldom to the extent suggested by the above questions. We believe that institutions offering nontraditional degree programs will be called upon increasingly by accrediting bodies and state agencies to show how their programs

are responding to learner needs. This suggests they will need to step up their evaluation efforts through appropriate institutional research.

The possibilities for cross-program evaluations are restricted by differences in objectives, content, and procedures among the programs. Nevertheless, it should be possible to select specific program components and measure their their influence on various student populations. Naturally, when comparable programs are found to be serving comparable populations of students, the problem of evaluating effectiveness is made easier, but it is important that the degree of comparability be well-defined so that the "apples and oranges" situation does not prevail.

FINANCING

Perhaps the most controversial set of public policy decisions, with the greatest potential for long-term impact on nontraditional education, are those policies concerned with financing and student assistance. At issue are policy decisions on the extent and methods by which public monies are used to support nontraditional education programs for part-time adult students.

In California, officials of the State University and Colleges (CSUC) have requested state support for external degree programs, arguing that there should be no distinction in funding between on-campus degree programs and off-campus degree programs (which are now financed on a self-support basis). They argue further that, although the system's current external degree programs probably could be sustained on a self-support basis, state funding is necessary if the system is to expand its external degree offerings to reach a greater number of people, especially people unable to pay the higher tuition.

State officials in California acknowledged the existing inconsistencies in funding policies for off- and on-campus instruction. At the same time they expressed concern over whether the state should encourage expansion of the external degree programs now in the CSUC system. Additional questions were raised about the relative value to the state of supporting nontraditional degree programs in contrast to other state needs, during a time of tight fiscal resources and with an already high percentage of professionals unemployed. The governor has vetoed requests for state support of nontraditional programs on the grounds that they are an unnecessary luxury. He has maintained that people enrolled in such programs can afford to pay tuition or that they have access to agencies or employers who can subsidize the costs.

State officials in Illinois and New York expressed similar concerns about the potential for rapid expansion of nontraditional programs in a period of fiscal austerity. In its 1976 master plan for post-secondary education, the New York State Regents forecasted a decreasing share of the state budget for higher education in the years to come. This highlighted what is becoming painfully apparent to state and institution officials alike–that decisions to fund certain programs will automatically deprive other programs, and that expressed demand for a program is no longer sufficient justification for its existence. Indeed, part of the resistance to supporting nontraditional programs comes from the suspicion of some officials that the new needs are being artificially created by colleges and universities who want to reverse declining enrollments.

It is apparent from our interviews with program and institutional administrators, and state officials in particular, that states have not yet developed policy guidelines defining their responsibility to provide services for part-time adult students. Several factors influence the development of such a rationale, including questions of quality of the degree programs, estimated costs of alternative support strategies, and impact of various state support arrangements on the private institutions (which have always been important political forces in each state and have actively served adults).

To develop such a rationale, answers must be found to the following questions: Who benefits from nontraditional degree education? In what ways? Who pays and from what sources? What is the return to the state for its investment in such programs? (In this instance, return is measured by increased productivity and efficiency through the use of new curricular and delivery formats.)

State officials in each state recognized both the political and financial implications of demands for more educational services for adults. As enrollments decline in the traditional age cohort, institutional administrators will argue that the resulting savings should be budgeted to serve new clientele. Pressures will continue to mount from within the adult community itself, from employer and professional groups, and from municipal, state, and other government agencies to use public monies to support education and training programs for adults. What is being sought by state and institutional officials is a

consistent set of policies that allow the state to discriminate with reasonable precision between what should be supported through public monies and what should be supported through other means. Illinois appears to have gone further than most states in discriminating among courses it will support in its community colleges, and California has been reported moving in the same direction with regard to its community colleges.

Interviews with key staff members of congressional committees and with officials in national professional and government agencies lead us to conclude that policy issues at the federal level for financing nontraditional degree education does not have the sense of immediacy that exists at the state level. There seems to be no upcoming legislation to deal with these issues. Major concern at the federal level centers around consideration of what commitments ought to be made to support further and continuing adult education and the roles of federal, state, and private sectors in promoting such opportunities.

Federal policymakers were less inclined than their counterparts in the states to make distinctions between credit-bearing (degree-related) and noncredit educational activities. One congressional staff member observed that in fact at the present time there appeared to be a general lack of clarity, if not confusion, in the Congress over the meaning of, and distinctions between, such terms as lifelong learning, nontraditional education, career education, compensatory education, recurrent and continuing education, and the like. The all-inclusive nature of the lifelong-learning ("Mondale") section of the 1976 Higher Education Act reflects the rather broad view taken by Congress in this initial effort to define the federal interest in the education of adults. Several persons interviewed doubted that the federal government would make a large investment of money in support of adult learning activities, either in terms of direct support of programs or of students through such mechanisms as a federal educational entitlement program. Pointing to the 275 federal statutory authorizations now scattered throughout the bureaucracy which already support adult education, few felt there would be substantial new initiatives until existing programs could be better coordinated and therefore justified.

Congressional staff members cited specifically the already low priority attached to postsecondary education by comparison with other domestic areas such as health, housing, transportation, and, more recently, the new emphasis on elementary and secondary education. Despite the growing interest of adults in educational activities, staff we interviewed expressed little interest in college-degree education for adults. They pointed to the growing skepticism in Congress and the public-at-large over the value of formal education as compared to work-related programs of training. In fact, as we have already indicated, there appears to be the general feeling in Washington that current interest in lifelong learning expressed by higher education institutions stems from the effort to bolster sagging enrollments, and not from an interest in better serving adults.

It was clear from our discussions that any federal entitlement legislation to provide more collegiate opportunities for adults is unlikely to become law. Several persons pointed to the commonly held view that any general entitlement program would be used primarily by white, middle-income adults who already have more education than the average. Almost all persons interviewed agreed that a federal entitlement program, if it should be enacted, would most probably be targeted to the disadvantaged and handicapped, and used for basic and vocational rather than higher education.

Congressional staff agreed that it is too early to gauge the degree to federal interest in adult education, or to predict what kinds of programs, if any, might be developed. Certainly, the collection of information by the HEW Lifelong Learning Project will play a role in defining the issues more clearly and suggesting where federal initiatives might make a difference. It is probable, however, that whatever policy is developed in this area will be for aid to students and not for support of education programs or institutions. It was suggested that a possible exception might be made to promote the development of delivery systems such as TV, audiocassettes, satellite communications, or newspapers, which could reach regional or national audiences.

Suggested Information Needs and Questions

There appeared to be general agreement that information collected in response to questions such as those listed below would be of considerable value to Congress as well as to state governments and individual institutions.

- How do students in nontraditional degree programs finance their education? What impact do different funding arrangements have on the characteristics of students who enroll? What

difficulties do students encounter in obtaining financial assistance?

- What are the start-up and operating costs of different program components?
- To what extent do current institutional and state budgeting practices present a problem for the development and support of nontraditional degree programs? Practice may include use of credit hours, FTE, faculty-student ratios, budgeting formulas, lower-upper division distinctions, etc.
- What is the return to the state for its investment in nontraditional degree programs? The return can be assessed in terms of increased worker productivity, improved articulation between education program and skills-and-manpower needs, placement potential, and improved program efficiency and productivity.

Obviously, the question of how nontraditional programs should be supported is a philosophical and political one. At the same time there are pragmatic factors to be considered. The answer to the question is not clear although it is one of the social issues most in need of solution. Lawmakers and others could be guided by the quantitative data suggested by the above questions. We believe the data would be valuable to decisionmakers, for clearly these new forms of education are under greater scrutiny than the more traditional ones.

CLIENTELE

The success of any degree program ultimately depends on its ability to attract potential students and meet their needs. Administrators and staff in all of the programs we surveyed were keenly sensitive to the rapid growth of nontraditional and alternative degree programs, and to the probability that competition will increase dramatically in the years to come as more institutions develop programs to attract the part-time adult student.

Program staff agreed that while a great deal is known about the characteristics of current students, little is known about the criteria used by students in selecting a particular degree program. Further, while some programs have conducted studies or used information collected by other market or needs surveys, little is known about what conditions or factors either encourage or discourage students to enroll in a degree program. State and federal officials acknowledged that there was information available about the demographic characteristics of unserved or underserved populations, but that there were still unanswered questions of how to get these persons more involved. As a consequence, demographic data provided little assistance in projecting new educational programs. Because of increasing competition for students, several programs are making an effort to answer these questions. At least two have conducted follow-up analyses of students who have attended special orientation or recruitment activities, or who had in other ways made inquiries about the program and had not enrolled.

Two programs included in our fieldwork experienced enrollment declines for the first time since they were established. Among possible reasons given for the drop in enrollment were economic conditions within the service region of the programs, the increased availability of alternative degree opportunities, cutbacks in GI benefits, and skepticism about the advantages of a degree. We were unaware of any attempts by program staff to determine how these or other factors influenced particular students.

Apart from minimum-age requirements set in some of the programs, each defined its target clientele quite broadly. A cursory analysis of the target-group descriptions contained in program documents points out the emphasis placed on time, location, and other situational barriers to access in defining the kinds of students these programs were designed to serve. Each program was particularly sensitive to the diversity of educational needs within its service area. Each attempted to devise instructional offerings and delivery systems that would be attractive to a diverse student constituency. An excerpt from a recent report of one program is illustrative of this:

> In general the College will diversify its student body—not in terms of new clienteles, for there is scarcely an identifiable group that the College is not serving, but in terms of numbers. And yet there has been no mention of blacks, Puerto Ricans, Chicanos, Orientals, and other ethnic minorities. Why?
>
> The problem lies in trying to group various people with varying backgrounds together in terms of particular needs. Common colors do not embrace common needs; each individual person has her or his own individual characteristics.

Several program officials, particularly those using nontraditional curricula and delivery methods, did acknowledge that they attracted a highly "self-

selected group of students who are, by and large, highly verbal, well-motivated, mature, and fairly well-educated."

Most program staffs agreed that it would be helpful to their planning to have information collected on the needs of specially identified population groups—military, housewives, or persons desiring career advancement or mid-career changes. However, few were able to say how this information might be used to develop new programs or modify existing ones.

A number of program staff indicated that in their efforts to design special degree programs they intended to develop closer working relationships with labor unions, commercial and industrial organizations, government agencies and professional associations. Such relationships already exist in some programs, and others report more and more requests coming from the above-mentioned groups.

In a very different context, the large number of military personnel who are currently enrolled in education programs was mentioned specifically by persons interviewed at the national level. Because of their particular circumstances—varying periods of service, mobility, and irregular work schedules—these persons are good candidates for nontraditional programs. They comprise a large proportion of the total market for these programs.

The problems of delivering educational services to members of the armed services have been of continuing interest to professional associations. The Education Commission of the States has recently issued a special report on the subject. In contrast to issues concerning other clientele groups, those relating to this group had a sense of urgency because of projections that one in every six students enrolled in post-secondary education would, in the next few years, come from the military. In addition, concern was expressed about recent decisions of the Department of Defense to establish military-operated education programs rather than to rely solely on civilian institutions. Apparently these decisions were made because of the difficulties encountered by the military in obtaining cooperation from traditional institutions, and the perceived insensitivity of colleges and universities to the peculiar needs of the military.

Suggested Information Needs and Questions

There is hardly a limit to the questions that could be asked about actual and potential students. Very probably some information on the topic can be assembled to guide federal agencies under the provisions of the Mondale legislation pertaining to lifelong learning. It is clear, however, that regardless of who does the task, information derived from answers to the following questions resulting from our interviews would be valuable to the evaluation of the nontraditional education movement.

- What are the characteristics of students who enroll in nontraditional degree programs? Are certain segments of the population greatly underrepresented?
- Do certain kinds of programs attract certain kinds of students more than others? Why?
- What factors encourage or impede adults from enrolling in a degree program?
- What are the characteristics of students who inquire about degree programs but do not apply? Who are accepted but do not enroll?
- What are the characteristics of students who want degree services but are presently not being served?
- What are the characteristics of students who should receive special attention by federal and state governments in providing access to higher education?

Increasing attention must be given to the question of who are, who should be, and who likely will be participants in nontraditional degree programs. The answers will naturally be influenced by many factors, including the extent to which there is ready access to these programs, and the nature of the response the programs make to the perceived needs of actual and potential students.

ORGANIZATION AND IMPACT

Because decisions on how to organize and staff nontraditional degree programs are closely related to particular local circumstances, it was difficult for the persons we interviewed to evaluate questions which might produce information readily useful to them in organizational decisions they were facing. However, both states and institutions must eventually make decisions on whether, and how, to organize for nontraditional education, and it was generally agreed that the organization and staffing of nontraditional degree programs are crucial to their effectiveness.

In addition, we have deliberately chosen in this section to raise the question of what influence

nontraditional arrangements have on conventional ones and, in fact, on total institutions and systems. Naturally, the question of how impact, if any is to take place, could be raised in the discussion of other policy areas such as program quality and finance. We believe, however, that it has an even stronger relationship to the problem of organization, since practices with respect to administrative arrangements, staffing, and like matters have a definite bearing on the extent to which nontraditional programs will be exposed to, and understood by, those people responsible for traditional programs.

Two overriding policy questions in this area seem to be: 1) What organization and staffing arrangements are required for different kinds of nontraditional delivery systems and curriculum formats? and 2) To what extent should and could traditional academic structures and their faculties adapt and adjust themselves to serve the nontraditional student? In a time of restricted budgets, uncertain enrollments, and fear of having to maintain campuses with underutilized physical and faculty resources, there is great concern within institutions, multicampus systems, and state governments over the answers to these questions.

Decisions on how to organize and staff programs become more complicated as the programs become more nontraditional. For example, a program designed to deliver on-campus degree programs to nearby off-campus locations may only require a rearrangement of course schedule and adjustment to teaching a part-time student body. Essentially, this program could be organized using existing department and faculty resources. In contrast, other programs may use less conventional delivery and curricular formats such as individualized instruction or competency-based programs, or they may call for a staff with a set of expectations and roles different from conventional faculty responsibilities. It would be more difficult to operate the latter programs within existing academic structures. Decisions on how to organize and staff are also closely linked to the methods used to finance the program; generally, programs financed on a self-support basis require a separate administrative structure or are organized with an existing continuing education unit.

By and large, the programs included in our study probably represent a fair sample of possible structural and staffing variations that prevail in nontraditional education. An examination of some of the decisions in this area illustrates the mounting tension between the alternatives of a separate organizational structure and of integrating programs into existing institutions and academic structures.

Empire State College is a good example of the complexity of decisions on organization for nontraditional study in a large multi-campus system. Empire was created in 1971 by the State University of New York as a nonresidential degree-granting college with a statewide mandate to provide flexible, student-centered approaches to higher education. In developing its programs, the college was to build on the educational resources of the system by using the library holdings, faculty, and other facilities of other State University units. The decision to create a separate college was further justified on the grounds that it would require no investment in capital construction and major equipment; it would be both cost effective and efficient. In addition, the college was to provide an institutional framework in which experimental and alternative delivery systems and curricula could be demonstrated and tested for possible use by other units within the State University System.

Empire does not have a campus in the traditional sense but instead operates out of regional centers, satellite stations, and other special purpose units dispersed throughout the state and coordinated by an administrative office located in Saratoga Springs. It is staffed by a cadre of mentors, located principally at each of the regional centers, who are responsible for the development of the students' educational programs. Part-time instructors and adjunct faculty who serve as tutors and resource specialists are also used.

While it is generally agreed that Empire has been successful in developing an individualized, contract-learning study program, many persons interviewed from within Empire and within the systemwide central administration believed the college has not had the kind of impact on the system they had anticipated. Further, there is concern within Empire that too much attention has been paid to the development of the learning-center approach and, as a consequence, too little attention paid to the development of alternative instructional strategies such as television and other media delivery. Some argue that Empire has become constrained by its learning-center approach. This has limited its development of alternative approaches and therefore has limited the college's ability to serve a greater variety of students. Others argue that Empire should continue to do what they believe it does well, and that the college cannot be all things to all people. In essence, they argue that there is a limit to the diversity of delivery systems that can

be managed by a single institution, and that overloading Empire with too many objectives will damage the quality of its programs.

It is significant that the state university system has changed considerably since Empire State was created, which raises additional questions about the use and effectiveness of an approach such as Empire's. Several other units, including the State University College at Brockport, have continued their own nontraditional programs and are beginning to compete with Empire for students in regions of overlapping service. Empire has tried to develop cooperative programs with interested state university campuses. However, in a period of tight budgets and fear of losing faculty positions, state university campuses prefer to operate their own programs, arguing that they can perform the same functions as Empire with existing campus facilities and with less expense. Discussions within Empire and the state university continue in an effort to determine the nature of Empire's responsibilities and the best organization for nontraditional programs within the system.

In a similar context, the Consortium of the California State University and Colleges is undergoing a critical examination of its mission and responsibilities within the multicampus system. Like Empire, the Consortium was created as a separate degree-granting structure to develop statewide external degree programs. Unlike Empire, the Consortium has no instructional staff of its own. It uses regular faculty from the system's 19 campuses. In addition, while Empire has a separate administrative structure, the Consortium operates directly out of the system's central administrative offices. The central administration is primarily responsible for overall system planning, coordinating, and budgeting, and with the exception of the Consortium has no direct operational responsibilities for degree programs. This particular arrangement places the Consortium in an awkward position in its relationship to other campuses and in its dealings with the central administration. A major organizational question facing the Consortium is whether or not it should continue to develop and operate its own degree programs or shift its emphasis to the development of alternative delivery systems, such as televised instruction, which would then be used by campus programs.

The organizational problems of State University of New York and the California State University and Colleges illustrate the important role of systemwide coordination in the development and delivery of nontraditional alternatives in multicampus systems. Centralized structures appear to be essential for programs designed to extend beyond the service area of any one campus, or that require the coordinated efforts of several campuses.

In addition, centralized structures serve as convenient contact points within the system for agencies, groups, and individuals seeking specialized nontraditional degree services. The latter was a principal factor behind the creation of the Chicago City-Wide College. In addition to coordinating the districts open learning program and TV College, CCWC serves as the primary contact between the district and all government agencies and industrial firms who want educational services.

Decisions on how or whether to organize for nontraditional programs at the state level are similar to those faced by multicampus systems; namely, whether to create new and independent organizational structures to deliver nontraditional services, or whether to rely on existing institutions to deliver these services. The Regents External Degree Program in New York, operated by the New York Education Departmant, is one example of a program established outside of existing academic institutions. In contrast, one of several reasons given for resistance to the establishment in California of a Golden Bear State College, similar in concept to Empire State, is the claim that these same services should and could be provided by the existing public higher education systems in the state.

Nontraditional programs organized within existing institutions face similar pressures from regular academic departments for a closer integration of activities. For example, the Bachelor of General Studies program at Roosevelt Universtiy is under increasing pressure to relocate the BGS program, which is now administered within the College of Continuing Education, to the Arts and Sciences division of the university.

The State University of New York College at Brockport recently created the position of Provost for Alternative Education with college-wide administrative responsibility for all continuing and nontraditional programs, including the adult BA/LS degree program. The provost will work closely with all administrative and academic units to coordinate and promote policies and programs designed to attract the part-time adult. In the next several years, Brockport will make a concerted effort to expand its nontraditional program alternatives and better integrate what has been a relatively marginal and isolated activity. It was felt that such a high-level administrative position

as provost could wield the kind of clout necessary to combat the strong resistance to change in admissions requirements, scheduling, new curriculum-and-delivery formats, and staffing arrangements to attract greater numbers of adults.

A question often raised in the interviews concerned the impact that nontraditional programs have on traditional ones. Many interviewees felt that the most significant aspect of the nontraditional degree movement was its potential for effecting changes in traditional academic structures, attitudes, delivery methods, and degree formats. For example, there is currently a substantial nationwide awareness of, and interest in, such features as credit for life and work experience, self-study, competency-based instruction, modular instructional materials, and the expanded use of television, newspapers, and other media.

One additional indication of the growing acceptance and legitimacy of nontraditional approaches is a recent policy statement on awarding credit for extrainstitutional learning approved by the Board of Directors of the American Council on Education. This also has implications for impact on traditional programs. The statement was endorsed by the Council on Postsecondary Accreditation. Through activities of its Office of Educational Credit and in cooperation with the New York State Regents, the ACE has developed a system for evaluating formal learning experiences sponsored by noncollegiate institutions—that is, organizations whose primary focus is not education.

The policy statement issued by ACE recommends that higher education institutions develop policies and procedures for measuring and awarding credit for learning attained outside of their sponsorship. One person interviewed observed that such a policy, if adopted, could have a far-reaching impact on the nature of American colleges and universities as the institutions shift from traditional academic responsibilities to increased responsibilities for evaluating and validating learning and competencies from other sources.

Whatever the eventual outcome of these developments, we were struck by the amount of interest there was in evaluating the impact of nontraditional forms of education on their traditional counterparts. One person who was knowledgeable about developments in states other than those we visited strongly believed that such information would have a significant impact on decisions made by state officials for the future of nontraditional programs.

Suggested Information Needs and Questions

Questions pertaining to the organization and impact of nontraditional degree programs are perhaps the most difficult to conceive in terms of their potential value for collecting usable and relevant information for institutions, systems, and state agencies. And yet, organizational decisions are among the first decisions to be made in initiating such programs. For this reason, we have specified some of the kinds of information suggested during the interviews. This information could be procured by asking general questions such as the following:

- What are the relative costs and benefits of different organizational arrangements (i.e., new and separate units, existing academic units, existing units responsible for continuing education, etc.) for delivering nontraditional degree education at the institutional, multicampus, or state levels?
- What administrative and organizational problems are created by the use of new delivery systems or other nontraditional components such as individualized study, TV or off-campus instruction, and evaluation of prior learning?
- Do nontrational degree programs present special staffing problems? How do staffing requirements and policies for nontraditonal degree programs differ from those of conventional degree programs (e.g., in roles and responsibilities pertaining to instruction, counseling, student evaluations; staff/student ratios; size of staff; use of traditional staff evaluation measures; job security arrangements, etc.)? What are the discernible qualities and characteristics of persons who appear to function effectively in nontraditional degree settings (individual variables to be considered in terms of expectations, ecucational background interests, values, teaching skills, etc.)? How does collective bargaining affect the staffing of nontraditional programs?
- What is the detectable impact of nontraditional degree programs on the institutions in which they exist? Impact to be measured in terms of the adoption of nontraditional program components, increased sensitivity to and interest in the needs of part-time adult students, changes in selected institutional policies—admissions standards and requirements, acceptability of noncollege learning—changes in faculty and

staff attitudes toward nontraditional education, development of nontraditional measures for assessing program performance and effectiveness.

- What has been the impact of the nontraditional degree movement on higher education in general, including its impact on institutions, government agencies, accrediting bodies, and other extrainstitutional organizations? Impact is a broad term, but it could include such developments as curricular innovations, new teaching procedures, new concerns about student outcomes, concern about access, inter-institutional competition or cooperation, new standards for accreditation, new formulae for appropriations, etc.

These questions may be seen by some as so general that they could not be made operational in an evaluation process. We admit to the broadness of their nature, but we know from this study and previous studies that they constitute an area of concern for many people. Their nature does not make for easy use in a normal evaluation design but we believe there are ways to elicit data about them by the use of case study and other research techniques.

4. Concluding Comments

There is hardly need to summarize the information reported in the last two chapters since the observations speak for themselves. It was apparent that the use of quantitative data in guiding the actions of decisionmakers has been and may likely continue to be minimal. Perhaps on some fronts, particularly in public funding of nontraditional programs, more information will be required in the future than has been in the past. Even so, it is likely that to the extent funding is based on program quality, judgments will be based on peer review and other subjective evaluations. We were impressed, and sometimes amazed, at the ready admission of many persons at all levels that educational decisions are not made on the basis of objective information but on political and philosophical considerations. Our own experience leads us to believe that this is equally true for traditional education.

Neither is it surprising that so many persons were extremely mindful of problem areas encountered in implementing nontraditional programs, and were articulate in discussing them. Moreover, they readily identified certain information needs that could be translated into questions for possible use in addressing the problems.

At first thought, it might seem that recognizing there is a need for information to solve these crucial problems contradicts the contention that quantitative data are not needed. We suspect, however, that there are factors that make the two less contradictory. For example, crucial problems demand continuous concern over a period of time, during which decisions are gradually reached that may seem intuitive at the moment they are made. It may well be that during the evolution of a rationale used as a basis for decisionmaking more reliance is placed on factual information than is realized. And further, since the problems will probably become increasingly acute, the need for data that can aid in their solution may also become more important.

But quite apart from the more specific information presented in Chapters II and III, there are a number of more subtle but very important factors that have a direct bearing on decisionmaking for nontraditional education. First is the sheer complexity of the decisionmaking process. There are so many participants in most decisions that particular responsibilities often cannot be identified, not all persons respond in the same way to "information needs," and there are further complexities in the interrelationships of relevant agencies. Thus, when we focus on decisionmaking in the area of nontraditional degree programs, we are rarely refereing to an isolated or simple situation.

Still further complexity results from the many levels of involvement in decisions about nontraditional education. We concentrated, in this study, primarily on institutional and state-level involvement, but we also interviewed a number of persons at the national level who viewed this new form of education from their perspective. And these persons, although not called upon to make decisions about individual programs other than to determine their eligibility for participation in federal or national programs, often exert much influence on the direction and support of nontraditional education. Their influence is a factor

to be reckoned with at this time when there are mixed feelings in Washington about the future direction of lifelong learning.

An even more discouraging note about the use of information for evaluation purposes was also called to our attention. In many interviews, and at all levels, criticism of evaluation studies abounded. The following comment made by a congressional staff member is typical of those made by other persons concerning the usefulness of program evaluation studies.

> Most of these *[are]* done by the U.S. Office of Education under contract . . . many are too late and use data that are too old . . . many studies try to quantify results that cannot easily be quantified . . . most studies *[are]* done in isolation from other similar studies and miss the "big picture."

Commenting further on the impact of reports and position papers which attempt to influence the attitudes of decisionmakers, this same staff member observed:

> These are often too long, full of jargon or statistics few understand . . . few people on the Hill have time to read such things . . . some studies use old data or come up with ideas members have long since rejected . . . most influence from these reports must come indirectly.

These comments in themselves are not very startling. Other reports have already identified some of these failings. What was surprising to us was the almost universal agreement on the minimal impact of evaluation research. Most persons interviewed were skeptical of the extent to which information collected through a national assessment of nontraditional degree programs could be immediately and directly useful to them in the decisions they face.

Apart from the criticism identified in the above comments, several other factors seem to account for the skepticism about evaluation studies, particularly those concerning nontraditional degree education. Part of this skepticism stems from the nature of nontraditional education itself—the great variety of programs; unclear definitions of or agreement on purpose, mission, and goals; the fluid character of the issues; and the absence of a set of criteria that could be applied in an assessment of effectiveness.

Despite the pessimism implied in the foregoing comments about the limited extent to which information is used, the complexities of decisionmaking in nontraditional education, and the criticism of many evaluation reports, we think there is no occasion to throw out the baby with the bathwater and concede that evaluation of nontraditional programs is either impossible or useless. Rather, we believe our study provides a perspective on evaluation that both tempers and expands some previously held concepts.

In attempting to delineate this perspective it seems useful to address two questions: 1) What are the constraints and limitations on the use of information by decisionmakers? and 2) What kinds of information appear to have the potential for impact on the direction of nontraditional education?

CONSTRAINTS AND LIMITATIONS

Many of the constraints and limitations on the use of information have already been expressed or implied. However, some of them deserve further comment and additional ones should be noted. Some constraints pertain to evaluation information itself, others to the context in which it is used.

Returning to the criticism that the context for evaluating nontraditional programs is made exceedingly complex because it usually involves a multiplicity of people and agencies, Weiner et al.[3] describe this situation aptly with an example from their discussion of opportunity costs. The evaluator, they say, must be concerned not only with the current decision context but with the emerging context as well—so that questions of substantial importance at the beginning of an evaluation are often rendered much less relevant by subsequent events. The authors cite an example of an evaluation of nontraditional degree programs in a state that was experiencing severe financial difficulties, and point out that an evaluator sensitive to this development would also realize that state legislators are beginning to ask for the justification for public subsidy of such programs. They then observe that since there may be unpredictable events that change the decision context, an evaluator can only seek to adapt to changing circumstances as time, authority, and resources permit.

Apropos of the complexity of decisionmaking, the head of a coordinating agency in one state reported that he had recently been asked to assemble the principal people in state government who were influential in the state's higher education policies.

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[3] Weiner, S., Rubin, D., & Sachs, T. *Notes on a theory of evaluative impact: Preliminary draft.* Stanford University Evaluation Consortium, February 1977.

After carefully surveying who these people might be, he found that he would have to include 91 individuals. Although they may not all have been directly concerned with the nontraditional area, it would be safe to say that a majority were. Therefore, it is important for those who sponsor and undertake evaluation studies to know that such studies must respond to the interests of a variety of decisionmakers. Furthermore, it should be pointed out that the decisionmakers themselves may change. An agency head whose comments we have quoted has recently resigned.

Another constraint that was made evident during the interviews concerns those factors related to the purpose, timing and nature of evaluation data. These take different forms, and isolated examples can only point to other possibilities. A high official in one of our three states cited a major study on the need for a variety of nontraditional approaches to higher education, sponsored by the legislature, which became counterproductive because it was perceived by many legislators as ammunition for goals that had already been established by other legislators. Since the purpose of the study was not clear, none of its recommendations was activated.

We also heard about the "too little and too late" phenomenon—that studies are often delayed in completion and even when reported do not include data which bear on decisions of current relevance or that have to be made at a propitious time.

Valuable as longitudinal data may be, the process of collection is becoming so costly and the delay in completing such studies so great that they may be on their way out. In fact, one federal official familiar with current funding practices recently reported his opinion that very little money will be available in the future from government agencies and foundations for longitudinal studies. Obviously, data from such studies, particularly longitudinal data on students, would be valuable in measuring the impact of nontraditonal degree programs, and perhaps could continue to be collected by individual institutions, but it seems doubtful that such data will play a major role in future comparative studies.

Another factor made evident to us is the subtlety of interrelationships among the sets of independently made decisions. A case in point is the question of state funding for the external degree program and the Consortium activities of the California State University and Colleges (CSUC). CSUC officials agreed that in all probability the decision to fund external degree programs would not be made as an isolated, discrete action. Rather, funding off-campus programs would evolve over time, with some programs funded on some campuses as enrollments decline in particular on-campus programs, freeing up resources which could than be shifted to an off-campus activity. Thus, the decision to support nontraditional programs would be made incrementally, influenced by a complex of other factors in the multicampus system.

Of all the difficulties in evaluation studies, none is more serious than the problem of establishing adequate and appropriate criteria so that the study results are maximally useful to decisionmakers. We heard a great deal about the need for information on two dimensions—student outcomes, and the impact of nontraditional degree programs on the society at large. Yet when confronted with the question of what criteria could be made operational in studying either dimension, interviewees were understandably vague. The higher education community has for years been struggling to identify measurable outcomes, but it has gone little further than to deal with objective factors such as units completed, performance, mobility into advanced study or employment, and the like. Data on the impact of the educational program on student development and his long-term performance are hard to come by. Even more baffling is the problem of how to ascertain the real value of nontraditional programs to a community or state—despite the belief expressed by a number of state officials that this should be a criterion for public funding.

Gooler[4] has addressed the matter of criteria for evaluating the success of nontraditional postsecondary education, and inlcudes such factors as access, relevancy to needs and expectations, quality of program, learner outcomes, cost effectiveness, and impact. However, he ends his discussion by commenting that questions remain to be answered about the adequacy of his categories, and that more needs to be done to determine useful and appropriate measures.

Finally, we believe that an increasingly important constraint on the use of evaluation data is the uncertainty stemming from the swiftly changing scene of postsecondary education. The facts are well known: projected decline in enrollment of conventional students that gives rise to the search for older students to take their place, competition among

[4] Gooler, D. Criteria for evaluating the success of nontraditional postsecondary education programs. *Journal of Higher Education*, January/February 1977, *68*(1).

institutions, serious questions raised about the value of a college degree, seemingly more talk than action about lifelong learning, relatively greater interest in elementary and secondary education, and fiscal stringency at all levels. All these factors result in an even greater degree of pragmatism in decisionmaking and often in hurried decisions that cannot wait for evaluation data. They must be considered by those who contemplate mounting evaluation projects of nontraditional programs.

It may seem that the foregoing discussion of constraints on the evaluation of nontraditional programs suggests that evaluation efforts should be abandoned. Our purpose was not to convey this impression but rather to indicate the major limitations that may serve as guidelines for future evaluation efforts. Given the newness of the nontraditional movement and the questions frequently raised about it, there will continue to be evaluative efforts by institutions, accrediting bodies, and government agencies. Moreover, as Weiner et al. have pointed out:

> The impact of evaluation may be caused either by its "product" (reports) or by the very acts of question posing, data collection, and subsequent analysis and discussion—the "process" of evaluation.[5]

Our fieldwork suggests that a variety of studies can be designed which would yield various types of impact as suggested by the Weiner team. In other words, special studies could be mounted for special purposes. We return to this point later.

POTENTIALLY USEFUL INFORMATION

Despite the admission by many decisionmakers that evaluation data have not often been used, our survey did gather comments about the kinds of information that are likely to become increasingly important. It seems clear that good data on the cost of nontraditional degree programs will be necessary, particularly at the state level where public institutions are involved. Such cost data will have to deal with unusual units of measurement resulting from new approaches. Future analyses will also probably be required to determine the costs of individual program components for it is likely that future evaluation studies will need to measure the effectiveness of these components in meeting learner needs.

There seems to be an increasing emphasis on studies that would measure outcomes and we suspect that where public funding is involved efforts will be required to document the effectiveness of programs in terms of results other than (or in addition to) such factors as persistence and satisfaction. Documentation will not be easy because of the criterion problem, and it has never been done well in traditional education. Nevertheless, current concern on the part of accrediting bodies, together with the persistent questioning on the part of state and federal agency personnel about the value of adult degree programs, point to the potential for more and better outcome studies.

We sense also that new questions will be raised about the need for nontraditional degree programs, and in particular the need for programs that serve special clientele groups within the general population. With the exception of those targeted for military personnel, most existing programs are open to people in the general population who qualify for admission. The result to date has been that the clientele served is simply an older version of conventional college students. Increasingly, questions are being raised about the ability of a given program to accommodate people with educational differences, women reentering education, adults interested in mid-career change, the post-retirement population, and similar groups. Market surveys have not been particularly useful and it seems likely that future studies of needs will have to give greater recognition to these differences.

Another need voiced by many interviewees was for information on the impact of nontraditional programs on the traditional ones, and on postsecondary education in general. We suspect that few people can envision two completely separate systems of higher education—the traditional and the nontraditional. Many have welcomed the advent of new ways of serving the older part-time student, but there should be something to be learned from these efforts that would have implications for the conventional system. This should be especially true since the older part-time student is becoming the norm in many colleges. Yet little has been done to document the extent to which the new has influenced the old.

As we reflect on potentially valuable information, it is important to consider the four problem areas reported in Chapter III. Each of them and the representative questions listed naturally suggest studies that could aid in evaluating program quality, matters pertaining to finance, actual and potential clientele, and problems of organization and staffing.

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[5] *Op. cit.*, note 3, p. 2.

As qualified by the discussion in the present chapter, there would seem to be many opportunities to assemble information that would be of help to institutions as well as to state and federal agencies.

THE NATURE OF EVALUATION STUDIES

While it is not within the scope of our responsibility to detail specific methodologies, we are led to believe that a multiplicity of approaches is needed to evaluate the kinds of nontraditional programs and procedures in question. We do not believe that the collection of quantifiable data is always the best technique, nor in fact that it can be used at all in some cases. As we have indicated previously, other research techniques including case studies, critical incident techniques, and detailed investigations of the needs of special population groups, are likely in our judgment to prove useful.

Earlier we mentioned the possibility of designing studies that would use some of the categories of potential impact outlined by Weiner et al., namely, symbolic, allocative, cognitive, political, and participant behaviors. Of these we are least impressed by the one designated as the symbolic impact since we doubt that it is as badly needed in the area of nontraditional education as are the others on the Weiner list. The point is, however, that we believe these categories should be reviewed by individuals or agencies that plan evaluation studies.

At this point we seriously doubt that an overall study to evaluate the impact of several nontraditional degree programs would be of substantial value. The progarms are so diverse in both their objectives and their approaches that comparisons are difficult. Further, the states vary tremendously in the setting they provide for the programs. Perhaps the best that could be done would be to compare the results of different program components or procedures.

We believe that a more useful approach to evaluation would be to target on specific problems as well as on the needs of particular agencies and user groups. Possible user groups which could be approached by the Institute would be the Veterans Administration, Department of Defense Education, the Division of Institutional Accreditation and Eligibility, or the Council on Postsecondary Accreditation. Each of these groups raised particular problems and concerns which would benefit from the collection of evaluation data. Or the Institute could select a number of states and work closely with them to define an evaluation study which would respond to the policy issues to be faced by state officials in the area of nontraditional degree education. Information collected for any one of these groups might also be useful to institutions as well as other agencies, but such possible use should be secondary to a narrow focus on specific problems of a specific user.

IN CONCLUSION

The goal of this study was to consider the premise held by the National Institute of Education that in planning an evaluation study it is imperative that the information needs of decisionmakers are identified and incorporated in the plan. Accordingly, our intent was to learn as much as possible about the questions and issues which decisionmakers face and their perceived information needs.

We are convinced that the Institute is correct in believing that people and agencies at all levels involved in the support and delivery of nontraditional degree education should have the opportunity to articulate their information needs. Although we discovered that many decisions are made without the use of data, even when the data are available, we also found that not only did decisionmakers have a sense of urgency about the future direction of nontraditional degree programs but that they also had definite ideas of the types of information that might help chart that direction. To the extent that we are correct in assuming that evaluation studies will be most useful if directed to specific problems and user groups, it is only logical that the people concerned should be involved in the planning.

No one can estimate the extent to which data will be used, and the realities of practice undoubtedly will prevail in many decisions. But this should not alter the concept that information can be helpful in influencing points of view that evolve gradually and that result in actions that may only seem intuitive.

Appendix A
Nontraditional Degree Programs Included in the Study

CALIFORNIA

The Consortium of the California State University and Colleges

Coastline Community College

ILLINOIS

Board of Governors BA Program, Governors State University

Chicago City-Wide College

Bachelor of General Studies Degree Program, Roosevelt University

School for New Learning, DePaul University

NEW YORK

Bachelor of Arts in Liberal Studies Program, State University of New York College at Brockport

Empire State College

Regents External Degree Program

Appendix B
Interviewees: Project on the Identification of Decisionmakers in Nontraditional Degree Programs and an Analysis of Their Information Needs

CALIFORNIA

California Postsecondary Education Commission

Donald McNeil, Executive Director
Kenneth O'Brien, Associate Director
Dorothy M. Knoell, Senior Specialist

California Board of Governors for Community Colleges

Gus Guichard, Acting Chancellor and Executive Vice Chancellor
Charles McEntyre, Director, Office of Analysis and Research

Other State Level

A. Alan Post, Legislative Analyst, California Legislature
Harold Geiogue, Prinicpal Program Analyst, Legislative Analyst's Office
Bruce Fuller, State Consultant, California Assembly Subcommittee on Postsecondary Education
Charles Goecke, Program Budget Officer, California Department of Finance

California State University and Colleges System: The Consortium

George E. McCabe, Director, Consortium
G. Edward Rudloff, Associate Director for Academic Programs, Consortium
Richard A. Straten, Administrative Coordinator and Staff Analyst, Consortium
Glen Dumke, Chancellor, CSUC System
Alex C. Sherriffs, Vice Chancellor-Academic Affairs
Dale Hanner, Vice Chancellor-Financial Affairs
Robert Bess, University Dean for Academic Projects
Anthony Moye, University Dean for Educational Programs and Resources
Donald Gerth, President, CSUC College at Dominguez Hills and Chairman, CSUC Commission on External Degrees

Coast Community College District: Coastline Community College

Bernard Luskin, President, Coastline Community College
Edward Decker, Dean of Instruction
John Buller, Dean-Admissions, Guidance, and Information Services
David Brownell, Director, Administrative Services
Estelle Feuers, Dean-Community and Student Services
Ron Bergman, Area Director
Jack McGill, Area Director
Norman Watson, Chancellor, Coast Community College District
Cory Thompson, Vice Chancellor for Business, Coast Community College District
Robert Humphreys, President, Board of Trustees, Coast Community College District

ILLINOIS

Board of Higher Education

James Furman, Executive Director
Jerome Wallhaus, Deputy Director, Health and Academic Programs
Richard Miller, Assistant Director–Special Programs
Roy Peterson, Associate Director, Senior Colleges
William Kelly, Associate Director, Community Colleges
Richard Wagner, Deputy Director-Financial Affairs
James Elsass, Assistant Director-Financial Affiars
Paul Lingenfelter, Associate Director, Financial Affairs

Illinois Community College Board

Fred Wellman, Executive Secretary
Robert Darnes, Director, Academic Programs
Ivan Lach, Manager, Information Systems

Board of Governors

Robert Pringle, Associate Executive Director

City Colleges of Chicago: Chicago City-Wide College

Salvatore Rotella, President, Chicago City-Wide College
Orlando A. Ponzio, Vice President, Adult Continuing Education
Oscar E. Shabat, Chancellor, City Colleges of Chicago District
Hymen M. Chausow, Vice Chancellor-Faculty and Instruction
John F. Grede, Vice Chancellor, Career Programs
Jim Zhigarell, Director, Instructional Development
Virginia King, President, Richard Daly College

DePaul University: School for New Learning

Howard A. Sulkin, Dean, School for New Learning
Marilyn Stocker, Associate Dean
Richard Yanikoski, Evaluation Coordinator
Reverend John Richardson, Executive Vice President and Dean of Faculties
Jack Kompare, Vice President-Business Affairs

Governors State University: Board of Governors BA Program

Elizabeth Stanley, Director of Assessment and Board of Governors Coordinator
Robert Press, Director of University Without Walls Program
Leo Goodman-Malamuth, President
Ted F. Andrews, Acting Vice President-Academic Affairs
Robert Krebs, Coordinator, Special Projects Research and Instruction

Roosevelt University: BGS Program

William R. Roderick, Acting Dean, College of Continuing Education
Karl D. Kaiser, Associate Dean
Gary K. Wolfe, Assistant Professor
Rolf A. Weil, President
Milton Greenberg, Dean of Faculties
Harold B. Bland, Controller
Dominic F. Martia, Dean, Graduate Division and Acting Dean, Arts and Letters
Lawrence Silverman, Dean of Students and Director, Off-Campus Centers
Seymour H. Patinkin, Chair, Academic Senate

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NEW YORK STATE

State Education Department

T. Edward Hollander, Deputy Commissioner for Higher and Professional Education, State Education Department and president-elect, State Higher Education Executive Officers (SHEEO)
Alvin P. Lierheimer, Associate Commissioner for Higher Education
Frank Abbott, Assistant Commissioner for the Professions (formerly Executive Director of the Colorado Commission on Higher Education, and past president of SHEEO)
Byron Connell, Chief, Bureau of Postsecondary Planning

Division of the Budget

Paul Veilette, Chief Budget Examiner
Joe Fernandez, Budget Examiner
Rod DeKay, Budget Examiner

State University of New York

James F. Kelly, Acting Chancellor
Loren Baritz, Vice Chancellor for Academic Policy
Harry K. Spindler, Vice Chancellor for Finance and Business
Charles M. Evans, Associate Provost for Undergraduate Education
Kenneth M. MacKenzie, Provost for Lifelong Learning
David Owen, Assistant Vice Chancellor-Universitywide Program
Charles B. Neff, Assistant Chancellor for Special Projects
Sanford G. Gordon, Assistant Vice Chancellor for Policy and Planning

Empire State College

Ronald Corwin, Acting President
John Jacobson, Vice President-Academic Affairs
Richard Debus, Vice President-Administration
Ernest Palola, Assistant Vice President-Research and Evaluation
Earl Conway, Director, Business Offices
George Bragle, Chair, Academic Senate
Bob Orris, Assistant to the Vice President-Academic Affairs
Marty Thorsland, Staff Member
William Laidlaw, Dean, Genessee Valley Learning Center
George Drury, Mentor, Genessee Valley Learning Center
Lloyd Lill, Mentor, Genessee Valley Learning Center and Chair, ESC Budget Committee
Bob Seidell, Mentor, Genessee Valley Learning Center and Chair, ESC Academic Personnel Committee

Regents External Degree Program

Donald Nolan, Director of Academic Programs and Director EDP, New York State Education Department

SUNY College at Brockport: BA/LS Program

Janel Beck, Coordinator, BA/LS Program, College of Continuing Education
Albert W. Brown, President
Richard Terry, Vice President-Academic Affairs
Ralph P. Gernarino, Vice President-Education Services
Burton Wolin, Vice President-Administration
Stuart Dobe, Director-Research
Michael Oshier, Director-Institutional Research

Fred Jandt, Assistant to the Vice President-Educational Services
Pat Masar, Director, Mature Adult Program, College of Continuing Education
Mary Markinsen, Director, Nonmatriculated Programs, College of Continuing Education
Joyce Budd, Staff, College of Continuing Education

FEDERAL AND OTHER AGENCIES

Education Commission of the States

Richard Millard, Director, Postsecondary Education Department

United States Congress

Robert C. Andringa, Minority Staff Director, House Committee on Education and Labor
Patricia Morse, Staff Assistant, House Subcommittee on Post-secondary Education
Jean Frohlicher, Counsel, Senate Subcommittee on Education, Arts, and the Humanities
Gregory Fusco, Senate Subcommittee on Education, Arts, and the Humanities

Federal Agencies

Norman Kurland, Lifelong Learning Project
John R. Proffitt, Director, Accreditation and Institutional Eligibility Division, Office of Education

Professional Associations

Kenneth Young, President, Council on Postsecondary Accreditation
Allan W. Ostar, Executive Director, American Association of State Colleges and Universities
Jerry Miller, Director, Office of Educational Credit, American Council on Education
James Nickerson, Servicemen's Opportunity College

Appendix C
Organization of Postsecondary Education in California, Illinois, and New York

The very brief descriptions of major features of state organization of postsecondary education in the three states in the study are largely drawn from two publications of the Education Commission of the States: *State Postsecondary Education Profiles Handbook* (1976, 1977) and *Higher Education in the States* (1975). Information from these sources has been edited and sometimes revised, however, and the present authors are solely responsible for errors in the information presented. The state organization charts are, as indicated, products of the particular state's coordinating agency.

CALIFORNIA

The overall structure and organization of postsecondary education in California is represented on Chart C-1.

State-Level Coordinating Agency. The California Postsecondary Education Commission (CPEC) functions as a coordinating agency with certain, although limited, statutory powers. CPEC is composed of 23 members, six of whom are appointed by the governor and 17 appointed by others. It has statutory responsibility for planning and coordination of all segments of postsecondary education in the state, and in addition has statutory authority to review individual institutional budgets, make budget recommendations, and review and recommend programs. CPEC has been designated by statute as the 1202 Commission for the state. The executive officer of CPEC is appointed by CPEC and serves at its pleasure. California does not have a state office of secretary of education, and CPEC is not a cabinet department.

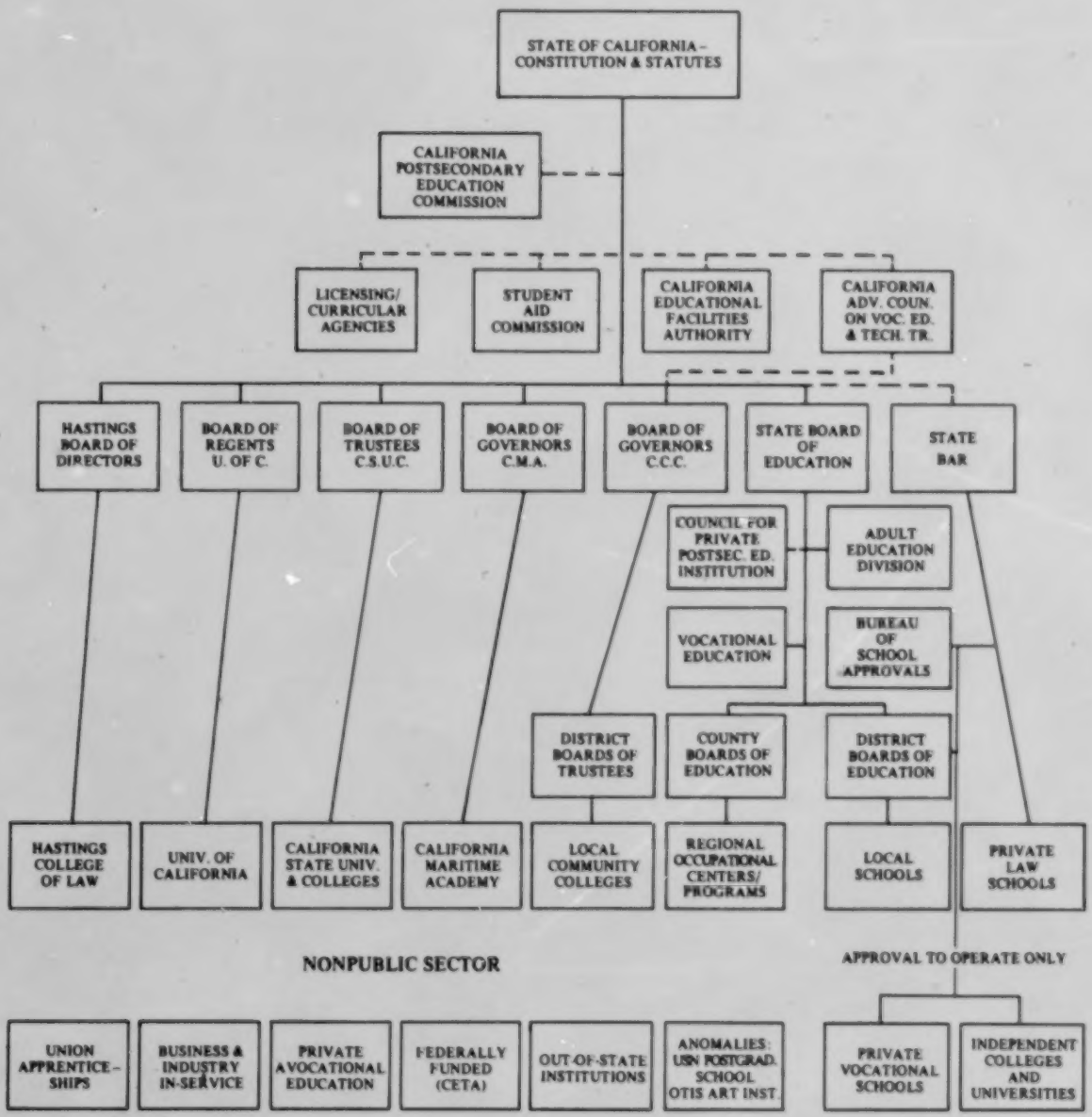
Institutional Governing Boards. Institutional governing boards in California include: 1) the Board of Regents of the University of California, exercising constitutional powers over nine public universities; 2) the Board of Trustees of California State University and Colleges, exercising statutory powers over 19 public universities; and 3) the Board of Governors of California Community Colleges, a supervisory body with statutory responsibility for coordinating the more than 100 public two-year colleges, each of which is in a district having a local governing board.

State Student Financial Aid. The California Student Aid Commission administers various scholarship and grant programs. In 1977 part-time students became eligible for financial assistance.

Direct State Aid to Private Institutions. The California State Constitution prohibits direct financial aid to private institutions.

Chart C–1

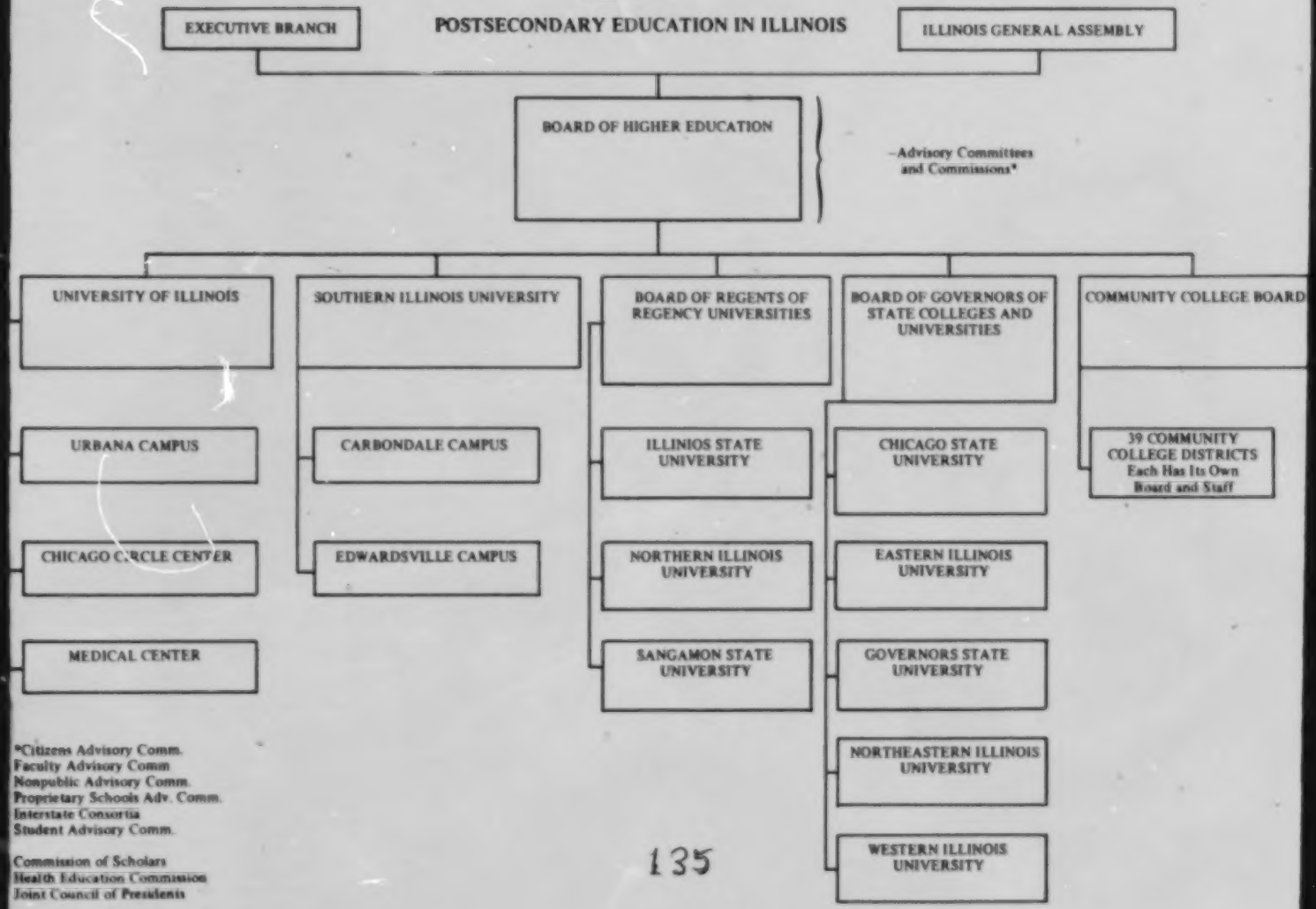
POSTSECONDARY EDUCATION IN CALIFORNIA



Source: California Postsecondary Education Commission

Chart C–2

POSTSECONDARY EDUCATION IN ILLINOIS



*Citizens Advisory Comm.
Faculty Advisory Comm
Nonpublic Advisory Comm.
Proprietary Schools Adv. Comm.
Interstate Consortia
Student Advisory Comm.

Commission of Scholars
Health Education Commission
Joint Council of Presidents

Source: Illinois Board of Higher Education

ILLINOIS

The overall structure and organization of postsecondary education in Illinois is represented on Chart C-2.

State-Level Coordinating Agency. The Illinois Board of Higher Education (IBHE) functions as a statutory coordinating board for all postsecondary education within the state. IBHE consists of 16 members, ten of whom are appointed by the governor and six appointed by others. It has statutory responsibility for planning and coordination of all public segments of postsecondary education in the state and conducts coordination as a matter of policy for public vocational/technical and proprietary institutions. IBHE has statutory responsibility for program approval, individual institutional budget review and consolidated budget recommendation for all public senior and junior institutions, and for the Illinois State Scholarship Commission (ISSC). IBHE has been designated by the governor as the 1202 commission for the state. The executive officer of IBHE is appointed by IBHE and serves at its pleasure. Illinois does not have a secretary of education and IBHE is not a cabinet department.

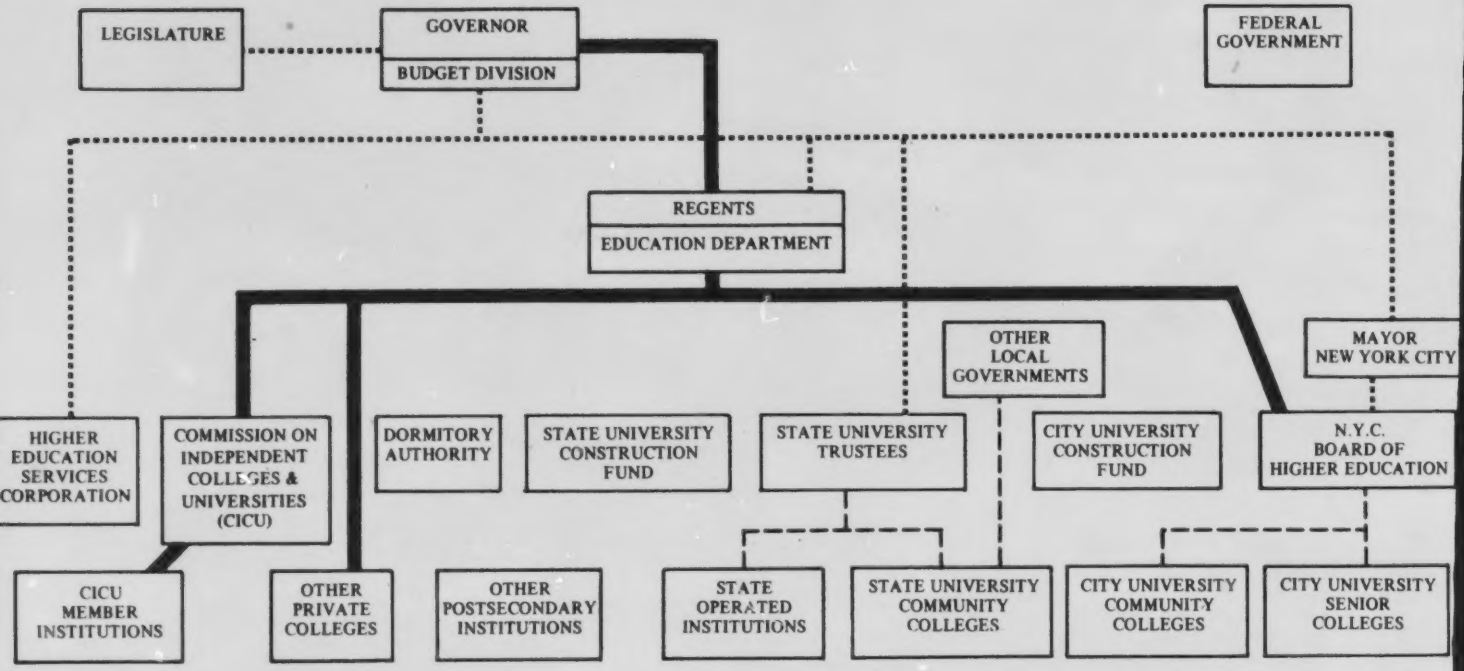
Institutional Governing Boards. There are four governing boards for public senior institutions in Illinois: 1) the Board of Governors of State Colleges and Universities, with statutory authority over five universities; 2) the Board of Regents of Regency Universities with statutory authority over three universities; 3) the Board of Trustees of Southern Illinois University, with statutory responsibility for two universities; and 4) the Board of Trustees of the University of Illinois, with statutory responsibility for three universities. The Illinois Community College Board serves as the coordinating board for 43 public two-year colleges and operates within the planning and coordinating responsibility of IBHE.

State Student Financial Aid. The Illinois State Scholarship Commission serves as the state student assistance agency and administers grants and scholarships. Part-time students are eligible for financial assistance.

Direct State Aid to Private Institutions. IBHE administers a program of grants to private institutions based on the number of Illinois residents enrolled.

Chart C–3

PRESENT STRUCTURE OF POSTSECONDARY EDUCATION IN NEW YORK STATE*



*As of June 1, 1976

Source: The University of the State of New York, The State Education Department

NEW YORK

The overall structure and organization of postsecondary education in New York is represented on Chart C-3.

State Level Coordinating Agency. The Board of Regents of the University of the State of New York (Regents) serves as the coordinating and supervisory agency for all levels of education, public and private, including adult and vocational education. The Board of Regents consists of 15 members elected by both houses of the legislature. The Regents have statutory responsibility for planning and coordinating all segments of postsecondary education, for program approval for all public institutions, and for registration of degree programs for both public and private institutions. The Regents have been designated by the governor as the 1202 commission. The executive head of the Regents has the titles of President of the University of the State of New York and Commissioner of Education. The state does not have an office of secretary of education; the commissioner serves as a cabinet member, and the State Education Department is a cabinet department. The commissioner is appointed by the Regents, however, and serves at their pleasure.

Institutional Governing Boards. There are two statutory public institutional governing boards in New York: 1) The Board of Trustees of the State University of New York (SUNY) with responsibility to govern 28 senior institutions and 36 two-year campuses, and 2) the Board of Higher Education of the City of New York with responsibility for 11 senior institutions and eight two-year campuses.

State Student Financial Aid. The New York State Higher Education Services Corporation serves as the state student assistance agency. It administers scholarship and tuition assistance programs. Part-time students are not eligible for financial assistance.

Direct State Aid to Private Institutions. The Regents administer a program of grants to private institutions based on the number of degrees awarded the previous year.

INFORMATION SPECIFICATIONS FOR DEVELOPMENT OF INSTRUMENTS TO BE USED IN THE EVALUATION OF NONTRADITIONAL PROGRAMS

Richard W. Watkins
Janet Ruyle

Center for Research and Development in Higher Education
University of California, Berkeley

June 1977

1. Procedures and Information Priorities

This project provides a first statement of specifications for information necessary to be responsive to the major needs of decisionmakers. The specifications generally deal with the following information characteristics: content, respondent groups, schedule for collection, possible instruments and forms of response, and presentation of information for different groups. Preparing information specifications is only an early stage in the preparation of a plan for data collection and analysis. This project intentionally omitted data collection planning because there are so many important issues that cannot be resolved until the actual planning phase for a defined study.

The need for a more precise delineation of "traditional" and "nontraditional" degree programs is of overriding importance. These terms have been used throughout this report as if they had an accepted meaning, because they were used in the original scope of work statement. In the second section of this report, three very general categories of nontraditional programs have been identified in order to suggest some of the detailed problems that will be encountered in the development of information collection procedures. No similar categorization of traditional programs has been attempted, although there is also great variety among traditional programs. Any definitions of traditional and nontraditional programs will be complicated and may be quite arbitrary in many respects. It did not seem necessary at this time to make the arbitrary distinctions in order to consider the kinds of information needed for such an evaluation study.

This report was limited to specifications for information about students seeking associate and baccalaureate degrees. The limitation shaped the program outcomes specifications in important ways, and also influenced the process information specifications. These specifications will be of limited usefulness for the evaluation of other kinds of educational activities or programs designed for adults.

PROCEDURES

A variety of activities was undertaken in the effort to produce specifications for information that could be responsive to the identified needs of the largest number of decisionmakers and at least potentially feasible for an external agency to collect. These activities are listed below in approximately chronological order. Some of them overlapped, however, and others were carried out intermittently.

1. Review of evaluation reports produced by a variety of nontraditional programs to learn about the kinds of evaluation questions implied in the reports, the kinds of information obtained, and the forms in which the resulting data were presented.
2. Initial telephone contacts and some personal interviews with faculty and staff members responsible for multiprogram evaluation of innovative programs at the systems level.

3. Interviews with staff of four nontraditional degree programs. Those interviewed included college presidents, program administrators, institutional research specialists, and instructional staff. The focus was on the kinds of information obtained, the information collection devices, and the strengths and weaknesses of available information.

4. Attendance at two workshops designed for personnel responsible for evaluation of higher education programs. The first was the *Workshop on Evaluation of External Degree Programs* sponsored by the California State University and Colleges (CSUC) Commission on External Degree Programs. This was a one-day workshop, and was attended by representatives from eight external degree programs in northern California. In addition to the formal presentations, the workshop provided an opportunity to talk with the program representatives and staff of the CSUC Chancellor's Office about information needs and collection problems.

The second was the *Outcomes Assessment Workshop* sponsored by the National Center for Higher Education Management Systems. It provided an opportunity to talk with institutional research staff from a number of two- and four-year colleges and universities. The materials also provided a number of references to data collection devices keyed to decisionmakers' information priorities.

5. Continuing assembly and review of evaluation priorities lists, models, and plans.

6. Consideration of crucial assumptions and constraints relevant to evaluation design and data analysis issues related to the use of information specified.

7. Review and classification of items and questions in data collection forms used for evaluation of higher education programs—both traditional and nontraditional. These items were tentatively grouped and regrouped as the specifications were drafted and revised, to see where clarification, restatement, additional specifications, and reorganization were needed. The process was also helpful in increasing awareness of the extent of variation in the kinds of program features about which program and other staff are seeking information. The instruments used most often for this purpose are listed in the appendix.

QUESTION AND INFORMATION PRIORITIES

Decisionmakers functioning in different roles and at different levels of responsibility have different information needs, although there is a considerable amount of overlap. These differences have been documented and discussed in the TEAM and NCHEMS reports (Smith & Smith, 1975; Micek & Arney, 1974). While the TEAM report is based on information desired by decisionmakers about nontraditional education, the NCHEMS report ranks preferences for information on higher education outcomes in general.

It is not conceivable that a single evaluation study of even a relatively small number of programs—traditional or nontraditional—could satisfy the major information needs of all those who must make decisions affecting the programs. There appears to be some consensus on the areas of concern among those decisionmakers not directly involved in the administration and conduct of particular education programs. The differences among these decisionmakers are in the priorities they assign to the areas and the kinds of information and amount of detail desired. It seemed best, therefore, to base the organization of the information specifications on the consensus about major questions or areas of concern. The differences among decisionmaker groups could then be reflected in the details of the information specifications and possible analyses.

The questions on which there is a consensus on high priority are presented below. For each question, a very general indication of the kinds of information that might be obtained is presented as

an aid in defining the questions. It should be noted that this listing represents a judgmental pooling of a variety of indications or priorities rather than the results of specific studies.

1. Does the program satisfy learner needs for personal and professional development? Who are the dropouts? Why did they drop out? (Outcomes)

Types of information

- Satisfaction with knowledge and skills acquired
- Satisfaction with progress toward educational and career objectives
- Developed knowledge and skills
- Documented educational and occupational career development

2. Who are the interested and actual learners? Why did students enroll in the program? (Students and program procedures)

Types of information

- Demographic and personal characteristics
- Prior educational and occupational experience
- Measured skills and knowledge at entrance
- Educational and occupational objectives
- Expectations for learning methods, locations, and times

3. How much do the programs cost? Are they financially viable? (Costs)

Types of information

- Program costs
- Tuition, fees, and private costs to students
- Historical and projected sources of funds

4. How well do different program features address the needs of learners? (Program procedures)

Types of information

- Satisfaction with relevance of each feature to educational objectives
- Satisfaction with faculty, staff, materials, and resources of program
- Satisfaction with choices of time, place, and methods for learning

5. Are the degrees credible and the procedures for assessment of learning valid and reliable? (Faculty and administrators)

Types of information

- Acceptance of degrees and credits by other institutions
- Accreditation by external agencies or by groups within the institutions
- Student and faculty satisfaction with procedures for assessment of learning

6. To what extent does the program impact on other postsecondary programs? (Impact)

Types of information

- Adoptions or adaptations by other programs/institutions of materials, methods, or procedures developed by the program
- Modifications or adaptations of faculty procedures or courses to accommodate special student or program needs

The consensus on the ordering of these questions and information types is greater at the state and institutional/system administration levels of decisionmaking than at the program administration/faculty level. The latter group may well give highest priority to Questions 4 and 5. Much of the information they need for program decisionmaking requires a level of detail that can best be satisfied by analyses of data collected specifically by the staff of each individual program. Collection and analysis of this necessarily detailed information as part of a multiprogram evaluation study would produce an unmanageable amount of data.

2. Study Design and Analysis Assumptions

Information specifications cannot be derived entirely from a consideration of decisionmakers' information needs. There are too many options for programs and student groups for which information can be obtained. Therefore, to prepare specifications for information, some working assumptions were made about the major features of a data collection and analysis plan. To arrive at these working assumptions, a model describing the interaction of students, program staff, procedures, and costs was chosen. Also, some reasonable constraints were set on the length of time over which the data collection effort might extend.

It seemed evident that any useful evaluation study would have to include the collection of longitudinal information for students, but that to follow both full- and part-time adult learners from start to completion of a baccalaureate degree would require too much time. We decided, therefore, that the longitudinal study of students would have to be done as a set of three essentially independent two-year longitudinal substudies. This time period was stipulated in the original work statement and planning project proposal.

Since students are the focus of any educational program, student- or alumni-based information on program outcomes should be the highest priority information to be sought. Opportunities for learning occur in a context that includes many important factors and interests, and the student outcomes result from the interaction of all these factors. The complexity of these interactions are described in Figure 1, a modified version of a figure first presented by Palola and Lehman (1977).

The high priority questions and relevant information listed in Chapter I can be related to this model and analyzed in terms of implications for the designation of groups from whom information should be sought.

Outcomes–Question 1
- (a) for those progressing towards or receiving degrees
- (b) for those who received degrees in prior years
- (c) for those who showed interest in degree work but did not pursue it to completion

Students–Question 2
- (a) characteristics when applying and/or entering
- (b) educational and degree objectives

Costs–Question 3
- (a) program costs and funding
- (b) additional private costs to students

Program procedures–Questions 2 and 4
- (a) description, classification, and assessment of procedures in response to student needs

Faculty–Question 5
- (a) assessment of quality of procedures
- (b) identification of strengths, weaknesses, and problems in procedures

This analysis suggested that information should be obtained from four groups of "stu-

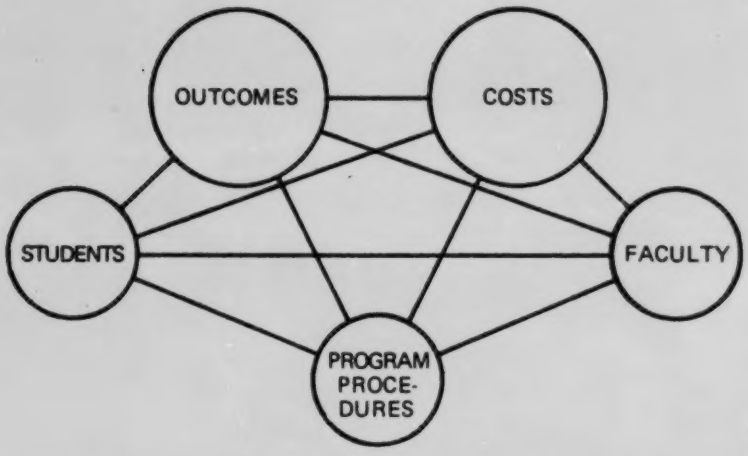


Figure 1: Student-Program Interaction Model

dents": (1) those interested who never enrolled or who terminated their work prior to receipt of degrees, (2) those seeking associate degrees, (3) those seeking baccalaureate degrees, and (4) those who received degrees in prior years (alumni). Information should also be obtained from two groups of professional staff.

The student-program interaction model is most appropriate for study of a single program. Application of the model to a multiprogram study poses additional problems that must be considered before the general features of an evaluation study plan can be determined.

The fact that no two colleges or degree programs are identical cannot be disputed. Many apparent differences are trivial, but many more are important or even crucial. The degree of importance of these differences and their details are usually not known or well understood, but they do exist.

This truism would not merit statement were it not that discussion of decisionmaking and of planning for multiprogram evaluation studies virtually require that it be disregarded. If an innovation that is even moderately different from most existing programs is to be evaluated in a multiprogram study, it is simply not possible to consider all the important variations among the several innovative and existing programs. In order to make decisions affecting both established and alternative programs, time and other pressures force a grouping of quite different programs into a very limited number of categories; for example, traditional and nontraditional, liberal arts and occupationally oriented, and two-year and four-year colleges.

The differences among students and student groups complicate the problem further. In many instances, degree programs which differ were designed for various kinds of potential students. Nontraditional degree programs are the prime example of this, but not the only one; traditional degree-granting institutions have also introduced marked variations in program procedures to meet the special needs of various groups of students.

Any consideration of the most important interactions between students grouped on combinations of characteristics and programs grouped on combinations of major features quickly produces more subgroups for analysis than can be dealt with explicitly in an evaluation study. Variation among students in each of the programs on factors relevant to learning may be as important as the variation among programs designed for different kinds of students.

Any feasible multiprogram information collection plan will not be able to consider many of the important differences among students enrolled. The experimental design procedure of random assignment is clearly not appropriate. Statistical control or analyses for separate subgroups can, at best, account for only a small part of these differences.

SUBSTUDY DEFINITION

These observations led to the conclusion that if a multiprogram evaluation is to be conducted, it will be necessary to group the several programs in ways that will permit some pooling of data for similar programs, both traditional and nontraditional, and for appropriate comparisons between dissimilar programs designed to accomplish reasonably common objectives. The phrase "reasonably common objectives" clearly implies comparison in terms of rather general long-term objectives, since program variations are due in part to their different short-term objectives.

A number of schemes for grouping both traditional and nontraditional programs have been developed. The more sophisticated of these require preliminary data collection about students attracted to various programs. The choice of a scheme appropriate to the final study plan will be of major importance.

We recognized that any grouping of different programs is a gross oversimplification of the complexities of each of the programs. Important features may appear to be overlooked. Nonetheless, three types of nontraditional programs were identified so that general requirements for information collection and analysis could be determined. The types are those described by Medsker et al. (1975).

1. On-campus curricula and degrees extended by flexible scheduling and location. Examples are the External Degree Program (California State University and Colleges), Armed Forces Contract Degree Program (Chapman College).
2. Periodic short-term residence alternating with longer periods of self-disciplined study in accordance with a program-prescribed course of study. Examples are the Bachelor of Liberal Studies Program (University of Oklahoma), Bachelor of Arts in Liberal Studies (State University College of New York at Brockport).
3. Individually developed or negotiated degree programs of study defined by a contract or series of agreements between a student and the program. Examples are Empire State College, Metropolitan State College, Florida State University System External Degree Program (Florida International University).

The specifications as originally conceived were to identify options for commonality and uniqueness of forms and items for different kinds of programs. These program types were defined to facilitate this identification. The first draft of the specifications included references to options. As the work progressed, it became clear that to spell out these options required a level of detail for both program classification and information specifications that was beyond the scope of this report. Such detail could be provided only after the designation of programs to be considered as potential participants in the evaluation study.

A large proportion of items and forms to be used for traditional programs and type 1 nontraditional programs can be common to all of them, with branches for associate and baccalaureate degree programs. The proportion of common items would be reduced when type 2 programs are considered, particularly if importance is attached to association of outcomes with program features. When type 3 programs are added to those being considered, the use of common items and forms is possible only for the assessment of long-term and very general outcomes; e.g., overall satisfaction with collegiate experiences, change or advancement in career related activities, or personal growth and development.

The specifications are presented with no reference to options for common and unique information collection procedures. Discussion of them does cite the need for core questions and program-specific questions for certain types of information, and the requirement to base analyses on subgroups chosen because of particular kinds of program experiences. As programs are identified for inclusion in the evaluation study, the need for common procedures and questionnaires will become increasingly important if program comparisons are to be made.

The final result of all these considerations was a division of the total evaluation study into six substudies, defined primarily on the basis of groups from whom information should be obtained, and secondarily on the basis of student degree objectives and stage of progress at the start of the proposed study. Stage of progress toward the degree objectives was used because of the two-year limitation of the length of the proposed study.

The six substudies and related questions for each are:

Substudy A: Applicants, Dropouts, and Transfers. Who are the interested learners? Why did they enroll in the program or institution? What kinds of students do not complete programs, and why? What happens to these students?

Substudies B and C: Students Working Toward or Receiving Associate Degrees (B), and *Upper Division Students Working Toward or Receiving Baccalaureate Degrees (C).* Does the program satisfy learner needs or professional and personal interests? Does the content of the curriculum address the needs of these students? Are the procedures for assessment of learner competencies and achievement creditable and valid? What are the private costs to the students?

Substudy D: Recent Degree Recipients. What happens to students after they complete their programs? How has their education contributed to educational and occupational success and satisfaction? How well satisfied are the students with what they have learned in college? What do graduates think of the program and experiences they had in college?

Substudy E: Faculty and Administrators' Perceptions of Programs. Will other institutions accept at face value the degrees and credits awarded by the programs? How creditable is the program to professional personnel within and outside the program? Are there special faculty requirements or incentives? What impact have these programs had on higher education practices?

Substudy F: Program Costs and Sources of Funds. How much do the programs cost? Will the programs be able to survive without special federal, state, or foundation support? Can new programs compete with existing programs once the initial development and tryout period is completed?

It seems clear that the total study should be broken down into some set of substudies. This arrangement may not be the best. It was chosen after trying out several others. Given the lack of specificity concerning the purposes of and context in which a multiprogram evaluation study would actually be conducted, the number of possible study designs to which information specifications could be addressed is very large. Additional reasonably realistic design possibilities were generated almost daily as important considerations emerged. It became evident that there is no "best" arrangement. This choice was made because it: a) matches the degree structure of undergraduate programs; b) recognizes the two kinds of degree objectives dealt with in the initial proposal; c) permits some comparisons among traditional and nontraditional programs, where these are appropriate; and d) allows for the presentation of information specifications for essentially intact substudies.

INFORMATION ANALYSIS PRINCIPLES

The information specifications for each of these substudies are presented in the next section of this report. They are grouped to suggest analyses appropriate to the kinds of student-program interactions described in Figure 1. It is assumed that when programs are selected for the evaluation study, some groupings of programs will be appropriate for selected analyses. While no analysis plans are suggested in this report, the following principles for data analysis and choice of respondent groups evolved as the information specifications were refined.

1. All analyses would be done separately for each program, and many analyses could be carried out only at the program level.

2. Some analyses could be made by combining information for different programs in the same program type, but only if the responses were not related to unique features of a particular program. For example, data on overall satisfaction with the college or program experience could be combined across programs; data on satisfaction with particular arrangements of faculty, materials, or resource features could not be.

3. When data are combined across programs, adjustments will be made for differences in the characteristics of students entering the several pro-

grams. The forms in which data on the pre-program characteristics will be available will be determined to a large extent by each program or institution. However, some scheme for deriving approximations to common forms for these indicators will be developed. This is discussed further in Chapter III.

4. If data are to be pooled across programs, or comparisons are to be made between programs or program types, crucial decisions involving technical, statistical, and measurement issues will be required. The specifications have not been refined to the level necessary to provide options related to these technical considerations. Final interpretations and conclusions will have to be heavily weighted by informal judgment.

5. The specifications generally imply data collection instruments and procedures appropriate for large-scale, complex studies. Such instruments do not presently exist in finished form, although many of them can be assembled by adaptation of existing materials. Assembly or initial development should be based on an initial round of rather intensive, small sample interviewing and observation. Nothing about the information to be obtained in this preliminary instrument development effort is included in the specifications.

6. Assuming that satisfactory instruments for a large-scale study are developed as suggested above, it will still be desirable during the study itself to collect additional interview or other kinds of intensive information for small samples of students. There are many important characteristics of programs and student groups that will bear on data interpretation, but which will be unknown to an external agency during the planning and instrument development stage. However well developed the large-scale instruments, it cannot be assumed that they are equally appropriate and meaningful for all programs and groups of people.

7. The measurement of pretest to posttest growth, while theoretically desirable, is generally not possible. Virtually all knowledge and skills measures are designed to provide good indicators of status at a particular time, and are quite insensitive to changes over time. In most instances, they are not even very useful as indicators of group changes unless the time interval is very long or the change is quite dramatic. If the change is, in fact, dramatic, then such a low floor and high ceiling would be required for the instruments that the pre- and posttests probably would measure quite different aspects of knowledge and skills.

The alternative of interpreting posttest information in terms of its content and in the light of different but relevant initial status information seems more appropriate. In some situations, such interpretations might be amplified by comparisons of groups. Statistical techniques which account for differences in initial status will be required. The use of statistical tests in such interpretations would not be appropriate, however, since random assignment of students to the different groups is not possible.

8. The specifications do not include the kinds of useful information that might be obtained using ethnographic, anthropological, or sociological methodology. This is so only because the use of such methods appears to be quite impractical within the limits of time and funds that are likely to be available for the evaluation study to which the specifications are addressed.

3. Information Specifications

The translation of decisionmakers' information needs and priorities to specifications for the instruments and procedures to obtain the information requires a shift in focus. Needs are generally not differentiated and statements of them employ quite global and undefined terms. This is to be expected. Decisionmakers may use information, but they are not likely to define needs in a way that will permit collection of information from the primary sources.

Information is obtained from people who function in particular roles in a given context. These people are students in Program A, or alumni of Program B, or faculty in Program C, or registrars at Institution D, and so on. A given information need of a decisionmaker may cut across all these roles. Where it does, it could have markedly different implications for approaches to soliciting information from potential respondents. In effect, the information specifications resulted from a detailed consideration of these implications.

ORGANIZATION OF SPECIFICATIONS

One important purpose in preparing and presenting information specifications is to approach an operational definition of the global terms used in decisionmakers' needs statements. The ultimate operational definition of these terms will be in the instruments used to obtain the information from various respondents. It would be premature to attempt to provide the voluminous and detailed specifications needed to prepare specific instruments for use in given settings. They depend on too many unanticipated planning decisions about the actual evaluation study.

We have sought an intermediate position between specifications using only conceptual or very loosely defined terms and those with overly detailed instrument-specific terms. The six exhibits identify information types (content), respondent groups, possible instruments, and forms of response. These exhibits are a first level refinement of the global terms employed in information needs statements. The information types in each exhibit are grouped according to the elements of the model described in Figure 1. Following each exhibit is a discussion of major issues and options for instrument development and data analysis. These should be considered as a study is planned.

A second important purpose of preparing specifications is to convert information needs priorities to priorities for potential instruments and respondents. As mentioned above, a given high priority need can cut across a number of respondent groups, and might be met by using a number of different instruments singly or in combinations.

For example, the high priority information on end of program knowledge and skills could be obtained by using any or all of the following measures: tests, subsequent progress, employer assessment, faculty assessment, and student self-assessment. Knowledgeable people who agreed on the priority of the information need would undoubtedly differ in the priorities they would assign to each of these indicators. Yet in planning the study, some one person or group will have to

determine that some instruments and procedures will be developed and used and others will not.

Suggested priorities for the content areas are included in the exhibits. They reflect considerations of information needs priorities, feasibility of instrument development, potential tradeoffs between costs and data quality and value, and adequate data interpretation. The last of these considerations was given considerable weight. A high priority is suggested for some content areas, not because decisionmakers asked for the information, but because it seemed essential to the best use and interpretation of information which was requested. It is important that the plan for collection of information minimize as much as possible potential misinterpretations that can result from the necessary groupings and oversimplifications discussed in the first part of Chapter II.

Finally the six exhibits are directed to the substudy options listed in Chapter II.

DEFINITION OF TERMS IN THE EXHIBITS

Abbreviated terms are used to limit the length of the exhibits. Following are definitions of the terms that are not obvious, with extended discussion in a few instances.

Time of Collection

Start of study, periodically during study, and end of study. These terms are used relative to the schedule for the information collection phase of the evaluation study. The actual schedule for data collection will vary from program to program to be consistent with the schedules of each. Latitude in the meaning of start and end of study will be required, but it will be necessary to set limits if the data collection task is to be manageable.

The collection of preprogram student data will have to continue through much of the term of the evaluation study. Some nontraditional programs permit a student to initiate studies at any time, with new students enrolling every week or month. Data for these new students will have to be accumulated as students apply. In planning a specific study, some arbitrary limit for the collection of information for new students will have to be set.

Postprogram information for a large majority of the students in the study would be collected at the end of the information collection phase. However, to minimize the costs of student follow-up, such data for students who complete their degree requirements during this phase might best be collected soon after program completion.

Application or entrance. Some of the preprogram information can be obtained from all applicants using application forms, but it is likely that much of it can be obtained only when or after the students enroll. This will vary from program to program. Ideally, program staff should be willing to obtain at the time of application as much as possible of the data needed for the evaluation study.

At termination. Information on the reasons for early termination (dropouts and transfers) should be obtained as soon as the student's decision to leave is known. Collection of this information should probably continue until almost the end of the data collection phase of the evaluation study.

Information Sources

Applicants. Those potential students who have completed the first form required for admission. Programs will vary in the precision with which they define and apply admissions requirements and identify applicants. Some arbitrary definition of applicants may have to be agreed upon with the staff of each program.

Enrolled students. Those students who have completed one or more of the steps required after the program has determined eligibility and placement within the program. Programs will vary in the way these steps are defined, and separate definitions may be required for each program. Simple registration for courses or first meeting with a mentor or adviser, or attendance at a first orientation session, may not be sufficient to identify a student as enrolled.

Nonenrolling applicants. Any person who has completed at least an application form for a program but who does not subsequently satisfy whatever requirements are used to identify enrolled students in each of the programs.

College records. This generic term covers all institutional, research, and faculty files containing nonconfidential data about student characteristics, qualifications, achievement, and status. Programs will vary in the amount of information that can be obtained or made available from existing files. Negotiations with cooperating institutions may be required to encourage them to collect and provide as much student information as possible in order to reduce the amount of student time required for this special evaluation study.

Program staff. Personnel who serve in administrative roles or offices, as contrasted to instructional roles.

Faculty/adjunct faculty. People who work with students primarily in an instructional capacity, such as teachers, mentors, counselors, orientation or workshop leaders, and resource specialists. Adjunct faculty includes those persons whose primary employment is outside of the program being evaluated but who have some paid or voluntary part-time instructional role within the general program structure.

Possible Instruments

Coding forms. Forms used for transcription of data in college records, e.g., transcripts, admissions files, faculty ratings.

Questionnaires. Forms used to obtain responses to a set of discrete questions, most often posed so that answers can be given in defined response options.

Interviews. Structured or semistructured person-to-person discussion directed to particular topics.

Opinion scales. Forms that request verbal expressions of attitudes which by definition are self-reports. May be a section of a questionnaire or interview schedule, or may be used alone.

Rating scales. Forms for recording assessments of observable performance. May be either self-ratings or ratings of others, and may be a section of a questionnaire or interview schedule or may be used alone.

Standardized tests. Tests of cognitive functions with precise directions for administration and scoring, and with exact or suggested time limits. These tests will most often be multiple choice, but some standardized tests include items that require short or free response answers. Normative data for defined groups may or may not be available for use in score interpretation. Most standardized tests are intended principally for individual assessment. When they are, they are sometimes referred to as narrow-band instruments.

Survey tests. Tests of cognitive functions constructed for use in group assessment, using either multiple choice or free response formats. These tests would most often be prepared specifically for this project, and normative data would rarely be available. They would usually be considered to be broad-band instruments.

Reports, minutes, and other documents. These include all documents provided by program staff as sources of information in lieu of detailed interview responses.

Forms of Response for Analysis

Frequencies in defined categories. Numbers of respondents marking particular response categories. The categories may be commonly used ones (e.g., male-female, age ranges, job classifications) or ones defined specifically for this study (e.g., reasons for early termination, educational objectives); they will most often be defined on coding forms or questionnaires.

Numbers, counts, or percentages. These are essentially the same as the frequencies defined above, except that the data would be provided directly by program staff or taken from reports in which the categories were defined by the program staff and procedures.

Interview response classifications. Categories of interview responses defined either before interviewing was initiated or after all interviews were completed and reviewed for popularity of various kinds of responses.

Interview summaries or excerpts. Summaries of, or excerpts from, interview information that cannot be systematically classified. These will most often be used when there is a limited number of a particular type of interviewee, or to provide illustrative support for conclusions based on more restricted instruments. Excerpts might also be used if information from an interview could not be assigned to an interview response category, but was considered to be quite important.

Single opinion scores. Numerical value of points in a continuum of reactions to a statement. The continuum may be defined by: (a) subjective value labels for the end points (e.g., useful/not useful); (b) subjective value labels for end and intermediate points (e.g., very useful, useful, no opinion, etc.); or (c) actual or implied scale values (e.g., useful for both personal development and job preparation, useful for personal development, useful for job preparation, etc.).

Summed opinion scores. Sums of scores for responses to a set of opinion items judged to be projections of a common attitude domain. The scores that are summed may be: (a) arbitrarily determined (five-point continuum assigned values 1 to 5), (b) empirically determined by judges (Thurstone scales), or (c) derived from internally consistent responses (Likert scale).

Single rating scores. Numerical values on a continuum defined by: (a) behavioral descriptions of the end points (e.g., can present complicated ideas in a very understandable way/cannot communicate simple ideas effectively); (b) behavioral descriptions of end and intermediate points (e.g., can write a publishable research report, can write an acceptable term paper, can write an acceptable letter of application, etc.); or (c) normative statements (e.g., top 10%, between 60th and 90th percentiles, between 40th and 60th percentiles, etc.).

Summed rating scores. Sums of scores for ratings of individual characteristics which in aggregate define a single more general variable.

Test scores. Numbers on a scale of cognitive functioning which has at least ordinal meaning, with demonstrable reliability adequate for at least the differentiation of definably different groups.

EXHIBIT A

Information Specifications for Substudy A
Applicants, Nonenrolling Applicants, Dropouts, and Transfers

Purposes of information collection	Primary users of information
Description of interested learners (Who are the interested learners? Why did they enroll or not enroll in the program or institution?)	1. Program staff, institutional and state planners
Study of dropouts, transfers, etc. (What kinds of students do not complete programs, and why? What happens to these students?)	2. Program staff, institutional and state planners
Student grouping or baseline data for subsequent analyses in other substudies	3. Evaluation study staff

Information type	Time of collection	Information sources	Possible instruments	Preferred (P) and Acceptable (A) forms of responses for analysis	Suggested priority
I. Students					
1. Sex, age, and ethnic background	Application or entrance	College records and/or Applicants	Coding form and/or questionnaire	Frequencies in defined categories	High
2. Preprogram educational background a. Secondary school b. College degree directed c. College credit courses—no degree objectives d. Noncredit, college sponsored education e. Other					
3. Educational objectives a. Highest degree b. Current degree c. General educational & career goals					
4. Current occupation					
5. Preprogram occupations					
6. Occupational objectives a. Specific to immediate degree programs b. When current degree program is completed c. Completion of ultimate degree		Applicants	Questionnaire		
7. Academic ability a. Verbal b. Quantitative c. Other		College records or Faculty and program staff or Applicants	Coding forms or Rating scales or Self-rating scales	Standardized test scores from admissions/guidance/orientation files (P) or Single rating scores based on normative statements (A)	
d. Overall				Summed rating scores (A)	

EXHIBIT A (continued)

Information type	Time of collection	Information sources	Possible instruments	Preferred (P) and Acceptable (A) forms of responses for analysis	Suggested priority
A. Students (continued)					
8. Knowledge	Application or entrance	Applicants	Standardized tests or Survey tests or Self-rating scales	Test scores in each area on comparable scales (P) or Broad band test scores on comparable scales (A) or Single rating scores based on normatively defined points (A)	High
a. Humanities and literature					
b. Mathematics and natural science					
c. Social sciences					
d. Overall				Summed rating scores (A)	
9. Skills					
a. Written communication (reading, writing)					
b. Oral communication (speaking, listening)					
c. Vocational/occupational					
d. Other (artistic, musical, mechanical)					
B. Program procedures					
1. Needs & expectations for program arrangements			Opinion scales	Single opinion scores based on implied scale values (P) or Subjective labels for end and intermediate points (A) and Summed opinion scores for subsets of related needs (P)	
a. Schedule for classes, seminars, studies					
b. Location for group meetings					
c. Methods of learning, contact with faculty					
d. Content of studies					
e. Financial assistance					
f. Information, guidance					
g. Orientation for reentry					
h. Certification for learning					
2. Reasons for decision not to enroll	Periodically during study	Nonenrolling applicants	Interview or Questionnaire	Interview classification (P) or Frequencies in defined categories (A)	
3. Reasons for early termination	At termination	Students terminating without a degree			
4. Assessment of programs and procedures			Opinion scales	Single opinion scores based on implied scale values (P) or Subjective labels for end and intermediate points (A)	
a. Schedule for classes, seminars, studies					
b. Location for group meetings					
c. Methods of learning, contact with faculty					
d. Content of studies					
e. Financial assistance					
f. Information, guidance					
g. Orientation for reentry					
h. Certification for learning					
i. Overall				Summed opinion scores for subsets of related needs (P)	

Information type	Time of collection	Information sources	Possible instruments	Preferred (P) and Acceptable (A) forms of responses for analysis	Suggested priority
C. Outcomes					
1. Numbers of applicants who do not enroll	Periodically during study	College records	Coding form	Frequencies in defined categories	High
2. Numbers of students terminating enrollment prior to receipt of degree a. No plans for continued education b. Transferring to other institutions/programs c. Reenrolled in same program d. Units completed, area of study e. Achievement (GPA if applicable)	End of study				
3. Faculty ratings of students leaving without degrees a. Ability b. Achievement (including GPA) c. Interest d. Objectives e. Financial and other problems f. Overall	At time of termination	Faculty	Rating scales	Summed ratings or Single ratings with defined points	Medium to low
4. Educational Activities a. Degree work, same field as in program b. Degree work, different major field c. Credit courses, no degree plans d. Occasional noncredit courses or activities e. No educational activity	End of study	Nonenrolling applicants and Students terminating without degree	Questionnaire and/or Telephone interview schedule	Frequency in defined categories	Medium High
5. Educational plans a. Short-term b. Ultimate					
6. Occupational activities a. Current employment b. Anticipated change in employment, if any or c. Reasons for unemployment					
7. Occupational plans a. Short-term b. Ultimate or career directed					

EXHIBIT A (continued)

Information type	Time of collection	Information sources	Possible instruments	Preferred (P) and Acceptable (A) forms of responses for analysis	Suggested priority
D. Costs					
1. Financial obligations	At termination	Students terminating without degree	Rating scales	Single rating scales based on relevant dollar ranges (P) or Normative verbal descriptions (A) and Summed rating scores	High to medium
a. For educational costs	↓	↓	↓	↓	↓
b. Personal/family/dependent support					
c. Other					
d. Total					
2. Financial resources					
a. Savings					
b. Support from parents and/or spouse					
c. Employer contribution					
d. Concurrent employment					
e. Scholarships, loans, federal support					
f. Total					

INSTRUMENT DEVELOPMENT ISSUES AND OPTIONS FOR SUBSTUDY A

Two major questions will require answers in planning for the collection of information outlined in Exhibit A: Should the reasons that some interested applicants do not enroll be determined? Should the subsequent educational and occupational experience of these nonenrolling applicants be documented?

Information and Cost Tradeoffs for Nonenrolling Applicants

Nonenrolling applicants are presumably one segment of the program market—a very important segment if program administrators are considering potential modifications to meet previously unmet needs. Knowing why some of the interested applicants do not enroll would also provide data that could be very useful in understanding the reasons other interested applicants do enroll. Thus, the first question is closely related to the first purpose for Substudy A.

The second of these two questions in effect extends the definition of dropouts to include anyone who applies for admission but does not ultimately receive a degree from the program. A two-year follow-up of nonenrolling applicants could add appreciably to information useful in contrasting the educational and occupational progress of those who did and did not complete the degree program.

The cost of data collection and analysis for nonenrolling applicants will be high, however, because they will present many "missing data" problems. Some programs prefer to keep application forms and procedures as simple as possible. In a preenrollment orientation period a decision about final enrollment is reached by program administrators and students. If an applicant decides not to complete the orientation, very limited data—perhaps no more than name, address, telephone number, and years of high school completed—would be available. If an applicant decides after completion of the orientation session that a different program would be more useful, information collected during the orientation might be available—such things as orientation worksheets or evaluation forms—but little more. These orientation byproducts may or may not include such things as demographic data, objectives, or needs and interests. In other instances, students may be asked to indicate their decisions in writing, with reasons for the decision.

Other programs have a sequence of application steps—completion of an application form, submission of admission test scores, personal interviews, and so on. Applicant information is obtained at each of these steps, but applicants may discontinue the process at any step, so that information available is in varying degrees of completeness.

Still other programs may admit students fully on the basis of some amount of applicant information, but require specified first steps—preparation of a portfolio, completion of noncredit skills tutorials—prior to enrollment for instruction. Students are "enrolled" in these first steps, but those who drop out prior to enrollment for instruction in a sense were never fully enrolled in the program. Again, varying amounts of information will be available.

Each of these examples suggests different kinds of missing data problems that would arise even if Substudy A were limited to the reasons for nonenrollment. They also suggest a number of definitional problems that will have to be resolved. The problems will be compounded if the substudy is to include the two-year follow-up. Most of the nonenrolling applicants will have had little contact with the program during this time, so that locating them and making follow-up contact with them will be time consuming and expensive. Once contacted, they may well have very little interest in responding to requests for information for an external evaluation study. In fact, those who do respond to such requests may represent a sample that is biased in important and unknown ways. The paucity of information from the time of application will, however, make it very difficult to detect or account for such biases.

In summary, inclusion of nonenrolling applicants in a multiprogram evaluation study would provide valuable information but would greatly increase the complexity and costs of the study. The potential value and quality of the information will have to be weighed against the added cost and time for this aspect of the substudy. Omission of one or both of the questions would reduce the cost of the total evaluation study, or would allow for Substudies B and C to be done more thoroughly.

Definition of Dropouts and Transfers

As increasing numbers of students attend college on a part-time basis, often combined with employment, the difficulty of identifying dropouts and transfers increases. This is particularly true for nontraditional programs, many of which are designed to give students great latitude in determining the rate of

learning progress. Students may "stopout" for a time with the full intention of returning. Even though they may not be enrolled for long periods they cannot be classed as dropouts. In other cases, programs may permit or encourage students to take courses at another institution in order to obtain a more satisfactory sequence of studies. Such students cannot be considered transfers.

Definitions will have to be negotiated on a program-by-program basis. In some cases it will almost certainly be necessary to make an initial contact with students not currently enrolled for the specific purpose of determining whether they have dropped out or have transferred to another program. Some rather arbitrary definitions may ultimately be required.

A two-year study may provide only partial answers to the important questions about dropouts and transfers for part-time adult students. A useful supplementary study to find out what happens to these students could be done using as subjects all students who had been enrolled in the year prior to the start of the evaluation study but who did not enroll during the term of the evaluation study. These students could be contacted at the end of the evaluation study to learn what had happened to them. Some of the applicant information collected at the start of the study might not be available for these students. However, this lack would be more than offset by the information that had been accumulated while they were enrolled in the program (e.g., length of time in the program, number and length of prior nonenrollment periods, grades, etc.).

Information Type and Response Forms

Some of the items listed under "students" may be available from presently used application or personnel forms. It would be most desirable, however, if data could be collected from all programs in a generally uniform way. This will require a survey of the application forms for all participating programs, followed by negotiation with each program on forms and procedures that will minimize required variations across all the programs.

Educational and occupational experiences and objectives. Items A-2 through 6 are particularly important information for some nontraditional programs. While they should also be viewed as relevant to student success and satisfaction in traditional programs, such programs may not attach as much importance to them. They may not see a need for obtaining the amount of detail thought to be important by some of the participating nontraditional programs. Some compromises will be necessary if reasonably common information is to be obtained for all programs. The most likely solution may be to use a common core of questions or information items that would be asked of students in all programs, with additional detailed questions that vary for different programs. It will be important to accommodate the wishes of each participating program staff in order to gain their cooperation, and to increase the value of the study results to the program. This could result in separate data collection instruments and formats for many programs. If this is the case, complex administrative and data management problems will be created at a later stage of the study. The tradeoffs between collecting detailed information appropriate to each program or a common core of more general information will have to be weighed frequently and as objectively as possible.

Information about prior educational experiences should be substantially different for those students seeking baccalaureate degrees from that for students seeking only associate degrees. Secondary school experiences will be less important for the former, but may be the only formal educational experiences for the latter. The nature and variety of collegiate-level educational experiences of upper-division baccalaureate students would be of great importance (Substudy C) but may be difficult to obtain and evaluate in a common frame of reference. In any case, if some procedures can be developed for placing these estimates on an approximately common scale, it would be of great value to obtain for all students some quantitative assessment of the quality of performance in prior educational settings. At the very least, where transcripts or prior work are available, best estimates of grade-point averages should be obtained or calculated using the same arithmetic procedures for all students and programs.

Written and oral communications skills. Information types A-9, a and b are high in priority for two reasons. First, many decisionmakers indicated level of achievement in these skills as a high priority measure of program effectiveness. It is important, therefore, that some assessment of start-of-program status be obtained. Second, these entry skills—particularly the written communication skills—are undoubtedly closely related to subsequent student success and satisfaction in the program. Some nontraditional programs have directed particular attention to the development of these skills in order to increase access to higher

education for some nontraditional students. Many traditional programs have also initiated skill development efforts for various student subgroups, but the nature of and context for the two kinds of program efforts (nontraditional and traditional) may be quite different.

The range of skill levels that are likely to be encountered in a multiprogram study, and the desired focus on college-level skills, will make it difficult to choose a single test. Several publishers now have tests intended for college-level use that may be appropriate, particularly for the assessment of reading skills. These tests may, however, require more time than is worthwhile if the only purpose of the information is group assessment and statistical adjustment. Also, the content may be judged to be inappropriate for older adults who have not been recently enrolled in secondary or college classes. Increasing numbers of colleges and universities are preparing their own writing skills tests, the primary purpose of which is individual student placement. If such tests are used when group assessment is the sole purpose for collecting the information, an inordinate amount of time will be required. It may be that relatively short survey tests of reading and writing should be prepared specifically for this study. The range may have to extend from the level of adult "survival" skills tests to the level of scholastic aptitude college admissions tests.

There apparently are no readily available standardized oral communications skills tests. Scales developed specifically for this study will be required if these skills are to be included. In fact, the most feasible approach to assessing all four skills may be to use specially developed rating scales with functionally defined scale values. Such scales would be limited to use by faculty or other staff to rate enrolled students at the end of approximately a six-week period of enrollment.

Needs and expectations for program arrangements. Information type B-1 is particularly important for an evaluation of nontraditional programs. Major features of many such programs stress responses to special needs of part-time adult students, including flexibility of schedule and location for learning, credit award for prior experiential learning, and various kinds of student support services. Some traditional programs have also made various kinds of responses to these needs as increasing numbers of students of all ages are undertaking part-time study combined with work. Regardless of program design, however, some students may enter both kinds of programs with expectations that could affect their ultimate assessment of the program features.

It will probably not be sufficient simply to ask applicants whether they have some of these needs, or whether the needs are "Very great, Great, Of little importance, or Nonexistent". Responses to such questions would be entirely defined by each student's personal perception of need. Without some reference to program-related options, they may not be useful for grouping students for subsequent analyses. Strength of needs might be determined by asking applicants to indicate identified program alternatives. Their responses could then be ranked by judges in terms of presumed strength of needs. An example item, which has not been tried out follows.

> *If a program did not permit me to have personal contact with faculty members on a regular basis, I would*
> 1. *not continue beyond the first semester*
> 2. *look for activities outside of class that would allow for such faculty contacts*
> 3. *seek such contacts with other program personnel in counseling services and so on*
> 4. *become involved in extracurricular activities with other students*
> 5. *spend more time on course-related reading and study.*

The options in this example are intended to indicate varying strengths of need as reflected by the actions people say they would take if the need were not met by the program. The first two options both suggest a very strong felt need for personal contact with faculty, but the first one indicates a stronger need because the action is more drastic. The third option suggests a need for contacts with professional staff, but the possible action indicates that it is not necessarily a need for intellectual stimulation. The last two options indicate very little need for faculty contact; they differentiate strength of need for some kind of personal contact through the program, since option 5 is intended to indicate virtually no such need.

This item is clearly not in a final form for pretesting. The example is presented only to illustrate a kind of effort that is needed to move from reliance on sets of independent, very general opinion and rating items toward the use of scales that justify more comprehensive analyses of the interactions between

students and program features. If a number of similar items relating to student needs were written and scaled through pretesting, total and subscores could be derived. Such scores might make possible more accurate measurement of the strengths of various needs of different kinds of students. The development and pretesting of such measures will require extensive time and effort if all the needs listed for information type B-1 are to be assessed.

Assessment of program and procedures. Information type B-4 is virtually identical to B-1. The items and instruments used for assessment should probably be different, however, since the students have had additional relevant experiences between the two times for information collection. It seems likely that at least some of the items for B-4 should be specific to the features of the particular program in which the students were enrolled. It is not at all clear that items could also be written in terms that would be general to all programs.

An example of an item that might be tried out for information type B-4 follows. This example was written in relation to the previous example so that analyses of program assessment data could be related in meaningful ways to preprogram indicators of student needs.

> *The opportunities for personal contact with faculty were:*
>
> 1. *so infrequent that this was an important factor in my decision to leave the program*
> 2. *infrequent in formal instruction, but I was able to find other settings in which faculty contacts could be made*
> 3. *of little importance because I was able to make personal contact with staff in other settings*
> 4. *of little importance because of the value of my contacts with other students*
> 5. *of little importance because I learned what I wanted to on my own*
> 6. *quite frequent and very helpful to me.*

The development of program assessment items will require even more thought and creativity both before and after pretesting than is required for student needs items. A large number of items similar to the example will be required for tryout to obtain internally consistent total or subscores. There are so many important dimensions to the interaction of students with programs that writing unambiguous items will present a real challenge. If reliable assessment of the responsiveness of educational programs to student needs is to be achieved this extended effort appears to be necessary.

In discussing above the desirability of using reasonably common forms to collect information for a number of different programs, we mentioned the need for some core questions common to all programs, and other questions specific to each program. It seems certain that this procedure will have to be followed in collecting data for information types B-1 and 4. Data would misrepresent a program seriously if they were obtained using only items that are the same for all programs. On the other hand, the generality of any conclusions will be limited severely if the items and forms are unique for each program.

Faculty ratings of students leaving without degrees. Information item C-3 is included in the specifications because it would be useful to have faculty perspective on the characteristics of dropout and transfer students as a supplement to the information provided by the students themselves. The data would be useful in corroborating or enlarging on reasons for early terminations. They may also be useful in analyzing the information obtained from these students at the end of the study regarding their experiences and progress after leaving the program.

It may be difficult to identify faculty and staff who can provide such information based on sufficient acquaintance with the students, particularly in larger programs. It will be essential that the information be obtained as soon as possible after the student makes the decision to leave. This will be a burden for the faculty—perhaps even a frequently repeated annoyance. In many instances, students may not have been in the program long enough for any faculty members to know them well enough to assess the factors listed in Exhibit A. In other cases, the detailed information listed may require that different faculty be asked to provide different bits of the data. It is possible that useful information will simply not be obtainable for appreciable numbers of students regardless of the effort expended, and that those for whom it is available will be very biased samples of the dropouts and transfers. The suggested priority for this information type is "medium," not because it is less important than the data provided by the students, but because of the presumed difficulty of obtaining it. There will be an important tradeoff between data

quality and usefulness in relation to cost and effort to get the information.

End of study information for nonenrolling applicants, dropouts, and transfer students. The general terms for the types of outcomes information to be collected at the end of Substudy A are similar to the terms used at the end of Substudies B, C, and D. Less detail in the response forms is suggested as one of the ways to increase the rate of cooperation. The end-of-study information for these special subgroups should be useful to compare their outcomes with those for students who receive degrees. The ease of interpretation of such comparisons will be very closely related to the degree to which the end-of-program data for the several groups can be collected using similar forms.

EXHIBIT B

Information Specifications for Substudy B
Students Entering Program with Associate Degree Objectives

Purposes of information collection	Primary users of information
1. Assess outcomes, accomplishments, and satisfaction (Does the program satisfy learner needs or professional and personal interests of students interested in associate degrees?)	1. Institutional presidents and deans, state planners and legislators, program administrators
2. Student satisfaction with program procedures (Does the content of the curriculum address the needs of the learners? Are the procedures for assessment of learner competencies & achievement creditable & valid?)	2. Institutional deans, program administrators, faculty, and staff
3. Indirect costs to students (What are the private costs to students?)	3. All decision groups

Information type	Time of collection	Information sources	Possible instruments	Preferred (P) and Acceptable (A) forms of responses for analysis	Suggested priority
A. Students					
1-9. Preprogram data listed in Exhibit A 10. Credit transferred for prior formal education a. Amount b. Level of performance in prior courses 11. Credit awarded for prior experiential learning a. Amount b. Judged level of performance, if applicable 12. Degree requirements waived for prior educational or experiential learning	Application or entrance	College	Coding form	Amount by area of study & total, with estimates of performance level	High
B. Program procedures					
1. Preprogram data listed in Exhibit A (Needs & expectations for program arrangements)					
2. Assessment of program and procedures a. Schedule for classes, seminars, studies b. Location for group meetings c. Methods of learning, contact with faculty d. Content of studies e. Financial assistance f. Information, guidance g. Orientation for reentry h. Certification for learning i. Overall	End of study*	Students	Opinion scales	Single opinion scales based on implied scale values (P) or Subjective labels for end and intermediate points (A) Summed opinion scores (P) or single opinion score with implied scale values (A)	High

Information type	Time of collection	Information sources	Possible instruments	Preferred (P) and Acceptable (A) forms of responses for analysis	Suggested priority
C. Outcomes					
1. Current educational objectives a. Change in current degree b. Change in ultimate degree c. Change in other	End of study*	Students	Questionnaire	Frequencies in defined categories	High
2. Current occupational objectives a. When receive degree b. Ultimately					
3. Student assessment of progress toward original and/or revised educational and occupational career objectives a. Academic skills b. Occupational skills c. Knowledge d. Personal development e. Clarification of goals and objectives f. Overall			Questionnaire or Rating scales	Frequencies in defined categories (A) or Single or multiple self-rating scores in each area	Medium to high
				Summed ratings scores (P) or single rating score with defined end and intermediate points (A)	High
4. Collegiate level written communication skills a. Reading b. Writing			Standardized tests or Survey tests	Scores over a wide range of ability levels	
5. Adult level oral communication skills a. Speaking b. Listening		Faculty or other staff	Rating scales	Ratings with functionally defined points (P)	Medium
6. Assessment of occupational skills development		Faculty/ adjunct faculty	Rating form	Single rating scores with functionally defined points (P) or with subjectively defined end and intermediate points (A)	Medium to low

* Students receiving degrees during the term of the evaluation study might best be queried at the time the degree requirements have been completed.

EXHIBIT B (continued)

Information type	Time of collection	Information sources	Possible instruments	Preferred (P) and Acceptable (A) forms of responses for analysis	Suggested priority
C. Outcomes (continued)					
7. Assessment of knowledge of broad areas of study a. Humanities and literature b. Mathematics and natural science c. Social sciences	End of study*	Students	Standardized tests or Survey tests	Test scores in each area on comparable scales (P) or Broad band test scores on comparable scales (A)	Medium Medium
		or Faculty in each area	or Rating scales	or Single or multiple scores in each area based on defined end and intermediate points (A)	Medium to low
8. Degrees completed		College	Coding form	Counts, numbers, & percentages	High
9. Progress toward degree objectives (for students still enrolled)		↓	↓	↓	↓
D. Costs					
1. Private costs to students and other financial obligations a. Lost job time b. Transportation c. Babysitters, etc. d. Relocation e. Duplication of housing f. Family/dependent support g. Other		Students	Questionnaire and/or Rating scales	Frequencies in defined categories and/or Single rating scores based on relevant dollar ranges (P) or normative verbal descriptions (A)	
2. Financial resources a. Savings b. Support from parents and/or spouse c. Employer contribution d. Concurrent employment e. Scholarships, loans, federal support f. Total				↓ Summed rating scores	

*Students receiving degrees during the term of the evaluation study might best be queried at the time the degree requirements have been completed.

INSTRUMENT DEVELOPMENT ISSUES AND OPTIONS FOR SUBSTUDY B

This substudy is limited to students working for associate degrees because such programs differ from baccalaureate programs in nature and expected outcomes. As the evaluation study progresses, students identified for inclusion in Substudy B at the start of the study will separate themselves into at least four subgroups. Some will drop out or transfer to other programs. When they do, they will become subgroups in Substudy A. Others who receive at entrance substantial amounts of credit for prior learning and experience will complete all the degree requirements at various times during the term of the study. Most full-time students will complete the requirements at the end of the term of the evaluation study, while part-time students will still be pursuing their degree work at this point.

The term "students" has been used in Exhibit B to include the last three of these four subgroups. The same general kinds of information should be obtained for all these students, but some of the details should vary to reflect the different stages of progress toward the degree. Information for students who complete their degree requirements appreciably before the formal end-of-study data collection period will have to be contacted to provide this information when they complete their degree requirements. (Although these students will become alumni during the evaluation study, few if any of them will have received their degrees early enough to meet the suggested criteria for inclusion in Substudy D, which is directed to alumni who received degrees one to three years prior to information collection.)

Issues for Student Group Definition

Substudy B is limited to students who initiate their degree work during the term of the evaluation study, in order to simplify the preprogram data collection task. The task of collecting the same or similar kinds of entry data for students in a number of different programs is too complex to rely on the use of historical data for students who are already enrolled. Even with this limitation, there will be a number of student group identification issues that will require some arbitrary decisions if the data collection task is to be manageable.

One major issue to be considered is that many students, particularly older ones, may initiate a program by accumulating credits with no specific degree objective. Only after they have explored and clarified their interests and personal objectives and gained a clear indication of their ability to handle college work successfully, will they choose a particular area of study and a degree objective. Limiting this substudy to those students who have settled on the associate degree objective will exclude some students for whom particular nontraditional programs were designed. The limitation was imposed because of the need to set definable boundaries on the respondent group. Without some boundary of this kind, the study could include a large number of students whose program participation was so limited and sporadic that no observable program effect should be expected. The restriction that students have established the degree objective at the time of entry is less defensible. It was based on two considerations: (a) desirability of limiting start-of-study data collection to those students for whom there is an expectation of sufficient program participation to yield some observable program effect, and (b) simplification of data management and analysis problems by limiting the potential number of student subgroups for analysis.

It would be possible to modify the second restriction to make the substudy design more consistent with the progress of part-time and/or adult learners toward degree objectives. For example, the limitation might be broadened to include students enrolled for sufficient credits that an associate degree could be obtained within four years if the student chose to work toward a degree and if the same load were carried throughout this period. Or it might be broadened still further to include any student who indicated matriculation for a degree at some time in the future as being probable. It should be emphasized, however, that any broadening of the limitation will result not only in an increase in the data collection and management task, but will also complicate seriously the study of dropouts and transfers (Substudy A).

A second issue to be considered in the definition of the substudy stems from the fact that some students will be entering the programs, and others will be completing degree requirements, continuously during the term of the evaluation study. This may not be an important problem for most traditional programs that have relatively few times when students may enter—fixed semesters or quarters—and have fixed residency requirements for degree award. It will, however, be a crucial problem for nontraditional programs. Some of them are designed to permit entry at any time appropriate to student needs and readi-

ness. Others are designed with flexibility in residency requirements depending on amounts of prior formal and experiential learning for which credit is awarded.

It will be crucial to make provision for continuous collection of start- and end-of-program information at certain program sites, but this will increase the cost of data collection by more than the proportional increase in the numbers of additional students. To achieve a reasonable balance between costs and quantity of data, a time will have to be set after which collection of preprogram information will be discontinued. Another point before which no post-program data will be obtained will also have to be set.

Information Types and Forms of Response

Some of the general issues to be dealt with in the collection of preprogram student information (types A, 1-9) were discussed in association with Exhibit A. The items and forms to be used for the collection of information in Substudy B (associate degree students) will have to be different in many respects from those to be used in Substudy C (baccalaureate degree students).

Most of the associate degree students will have had little formal education beyond high school. The quantitative data summarizing high school experience should be sufficient in most instances. In the nontraditional programs, however, significant numbers of students will have accumulated college credits by taking courses without any degree objective, and others may have had various noncredit college courses. It will be necessary to provide for the collection of at least the amount of college credit accumulated by these students.

Ability, knowledge, and skills. There will undoubtedly be great variation among associate degree programs, both traditional and nontraditional, with respect to available measures of academic ability (A-7). Such data, if they are available at all, will ordinarily have been collected as part of a postadmission guidance and counseling program, rather than as the result of an admission requirement using one of the more common admissions tests. If test data are not available in college records, it will probably be difficult to persuade the programs to collect it for this study by means of a special test administration.

Similarly, measures of knowledge in broad areas (A-8) may be quite inappropriate for many associate degree students, while vocational and occupational skills measures may be very appropriate, at least for students in occupationally oriented degree courses. For analysis, unless students are to be subgrouped by educational objectives at the level of major field, it will most likely be necessary to devise some scheme for converting various knowledge and skill indicators to some common derived scale.

The one skill area in which a concerted effort should be made to obtain information of as high a quality as possible is that of written and oral communication skills (A-9, a and b). Such data will be of great importance to the interpretation of related outcomes measures that are a high priority kind of information for many decisionmakers. Comments about the needs and difficulty of assessment of the skills were made in association with Exhibit A.

Assessment of ability, knowledge, and skills at entrance will probably have to rely heavily on student self-ratings, ratings by program staff, and some scheme for converting scores from an array of essentially noncomparable tests to a common scale. If staff ratings are used, they probably should not be obtained until at least a month after the students have been in the program, so that staff will have some opportunity to have become acquainted with the students.

Credits transferred or awarded, and degree requirements waived. The collection and organization of information about prior learning that is relevant to degree requirements will pose serious problems if data are to be pooled across programs. Programs vary widely in the ways in which they deal with the transfer and award of college credit for prior learning. This is particularly true of many nontraditional programs.

Clearly, the issue of credit for prior formal education (item A-10) is simpler than that of credit for prior experiential learning (A-11). Traditional programs have been dealing with the former for some time. However, the common currencies of credit hours and grades are becoming less meaningful as the variety of higher education instruction and assessment procedures increases. It may be necessary to devise for this evaluation study procedures to obtain some kind of common derived indicators of quantity and level of performance of prior education.

Award of credit for prior experiential learning is still an evolving practice. Most of the effort has necessarily been directed to procedures appropriate for individual assessment. The use of College Level Examination Program tests, the New York Regents Proficiency Tests, or procedures developed by the Cooperative Assessment of Experiential Learning project, would require too much student time and money to be practical for program evaluation. There

is probably little uniformity among different programs in the procedures for award of such credit. In fact the procedures within particular programs may vary markedly over time and for different students. The state of the art is such that perhaps the most that can be done for a program evaluation study is to group students having received or not received such credit, or to record the percent of total degree requirements that were satisfied through experiential learning.

Assessment of program procedures responsive to student needs. The discussion of instrument development for information types B-1 and 2 for Substudy A is generally applicable to Substudy B. Little more can be said without experience in the development of such information. It does seem likely, however, that more items and subscores would be required to cover adequately the longer-term involvement of those students who continue in the programs. It is also very possible that scales or scores of student assessment of progress toward their objectives (information type C-3) will be closely related to scores for B-2. The two sets of opinion indicators or ratings may simply be different ways of assessing essentially the same attitude.

Progress toward educational and occupational objectives. The focus of ratings for information type C-3 ideally should be on change over time of the factors related to student objectives. This ideal is not attainable for important reasons. Many students' objectives should and do change as the result of their continued education; for them, this may be the most important outcome. Thus, if progress toward student objectives is the focus, the times at which initial and final status should be assessed are defined only by the students. The alternative of using objectives defined by the program, and collecting data at times specified by the program, is contrary to the purposes of most educational programs. This is particularly true for nontraditional programs of the second and third types defined in Chapter II.

A potentially useful procedure may be to ask students for ratings of end-of-study status on at least each of the factors listed in Exhibit B in conjunction with ratings of the importance of each of these factors to the individual student's objectives. Stated importance of the factors and self-perceived status on each of them may, of course, be confounded in important ways. Undoubtedly, a great deal of item development and analysis will be required to know if this approach will provide useful data for meaningful analysis.

However the ratings of end-of-study status are obtained, they should be analyzed using preprogram test scores and/or ratings on relevant variables for statistical adjustments or for identifying subgroups of students to be contrasted on these end-of-study ratings. This will require careful consideration of detailed plans for analysis when the rating scales are developed. These analysis plans will depend, in turn, on procedures and arrangements that can be made for the collection of preprogram data. There is, therefore, little more that can be suggested now for the development of the rating scales.

Student self-ratings are the most frequently used procedure for assessment of educational outcomes. The pool of potential items that might be used or adapted for the ratings is very large. If existing scales using functional or well defined normative descriptions of the points on the scales can be identified, they will be more useful than items that make use of subjectively defined scale values.

As noted above, ratings of progress may be closely related to assessment of program procedures. It will still be important to get both kinds of ratings. Many state-level decisionmakers will attach more importance to student assessment of progress resulting from collegiate enrollment than to assessment of the program procedures. On the other hand, program and institutional decisionmakers will probably be particularly interested in student assessment of program procedures, in order to see how they might improve the program.

Communication and occupational skills. The collection of data for information types C-4, 5, and 6 will be particularly important for associate degree students. The procedures employed for assessment of communications skills may have to vary for the several programs. For example, one program may have the development of communication skills as an objective only for those students who cannot demonstrate a predetermined level of competence at entry. A second program may adopt this as a general goal but recognize that students enter with different levels of skills, and should be expected to exit with increased but still different levels of skills. Another program or institution may accept only students who have satisfied program requirements for communication skills, and devote no explicit attention to skill development. If a single set of instruments were to be used for all of these programs, they would have to be quite broad in range. In fact, different instruments for different levels of skill difficulty may be appropriate. Certainly the analyses and interpretation of the

data should be quite different for each of the programs.

The problems in locating or developing appropriate communications skills instruments were discussed in connection with Exhibit A. In a sense, these problems assume greater importance at the end of the study, because they are associated with outcomes indicators. Some ongoing development work by an external agency (ACT) may have progressed to a point where appropriate instruments will be available at the time end-of-study data are to be collected. If, however, only faculty ratings can be used, it will be essential that the rating scales be developed with a clearly stated normative frame of reference and/or functional definitions on the rating scales.

The assessment of occupational skills (C-6) will be important for many of the associate degree programs and students. The choice or development of instruments will undoubtedly have to be done in the context of program and course objectives. It may even be necessary to develop different instruments for several groups of students identified on the basis of student objectives (e.g., business, computer technology, graphic arts).

Survey tests for the several occupational skills might be assembled from various certification tests, or from assessment devices used by professional and occupational associations. Possible opportunities for cooperative development efforts directed to program assessment should be explored. If pools of skill items cannot be located through such sources, a possible alternative would be to assemble course or classroom tests used in the cooperating program to provide a pool of items from which the survey tests could be assembled.

Knowledge in broad areas of study. The inclusion of information type C-7 is responsive to the expressed interest of an appreciable number of decisionmakers. Such information should probably be obtained for all students for whom occupational skills tests are *not* appropriate. Alternatively, the group for whom this information should be obtained might be all those students whose ultimate educational objectives include the baccalaureate degree.

Even though such data could be important in assessing the outcomes of degree programs for many students, the suggested priority for the information type is "medium." This was based on the following considerations: (a) the high cost in dollars and student time required to obtain reliable information, (b) on the average, decisionmakers ranked this information lower than other outcomes indicators, and (c) this information would be relevant for only some programs or student groups included in Substudy B.

Assessment of general knowledge for students enrolled in degree programs has been a problem to which extensive effort has been directed over many years. For the most part, the instruments are intended for individual student evaluation and are organized by broad or restricted discipline areas. The choice of broad areas of knowledge as the focus for Substudy B is based on the assumption that associate degree programs generally will not permit sufficient specialization to justify the use of specific discipline or subject tests. Survey tests for use in program evaluation are needed. The tests should cover a broad range of knowledge. Item sampling techniques would probably be most efficient for this purpose.

Private costs and financial resources. Private costs of higher education to students (information type D-1) are important for all students, and may be particularly crucial for older part-time students in nontraditional programs. This information should be used in close conjunction with the program cost information collected in Substudy F, but it will probably not be possible to obtain the same level of precision. Distinctions will have to be made between lost job time and income and foregone earnings. Rather broad ranges of cost categories will have to be used. Somewhat equivocal definitions of time periods for estimating costs will have to be established. While private costs are a high priority item as part of the overall cost information, it may be so difficult to obtain that the effort should be made only for programs that can also provide information for Substudy F. In other words, it seems likely that private student costs should be obtained only if good data on direct program costs can be obtained.

With the increase in enrollments of part-time students and older adults who have many kinds of obligations, it is important to understand more completely the many sources on which they draw to finance their education (information type D-2). Although it might be useful to know about student plans at entrance, estimates at that time might be quite unreliable. Collection of data at end of study will be more useful since the estimates will be based on actual experience.

EXHIBIT C

Information Specifications for Substudy C
Students in Upper Division (or equivalent progress toward degree) with Baccalaureate Degree Objectives

Purposes of information collection	Primary users of information
1. Assess outcomes, accomplishments, and satisfaction (Does the program satisfy learner needs or professional and personal interests of students seeking baccalaureate degrees?)	1. Institutional presidents and deans, state planners and legislators, program administrators
2. Student satisfaction with program procedures (Does the content of the curriculum address the needs of the learners? Are the procedures for assessment of learner competencies and achievement creditable and valid?)	2. Institutional deans, program administrators, faculty, and staff
3. Indirect costs to students (What are the private costs to students?)	3. All decision groups

Note: *The types of information to be collected for students doing upper-division work will be similar in most respects to those for students starting work on associate degrees. It would be expected, however, that the wording of questions or scales to solicit this information would be markedly different in many instances, because of the differences in educational objectives and prior educational experiences. These differences are at a level of detail not shown in the Exhibits; some of them are discussed briefly below.*

Entries are shown in this Exhibit only if the information type is not included in Exhibit B, or if the possible instruments and/or forms of response are considerably different from those shown in Exhibits A or B.

Information types	Time of collection	Information sources	Possible instruments	Preferred (P) and Acceptable (A) form of responses for analysis	Suggested priority
A. Students					
1-6. See Exhibit A (A 1-6)					
7. Academic ability a. Verbal b. Quantitative	Start and periodically during study	Interviewer or Faculty or Students	Rating scales or Self-rating scales	Single (A) or multiple (P) rating scales of each ability with normatively defined points, using upper-division students as normative base	Medium
c. Overall				Summed rating scores (P) or Single overall rating scores (A)	High
8. Knowledge base for upper-division study a. Broad areas of study b. Specialized or major field area of study and/or c. General knowledge base				Summed rating part scores (P) or Single rating score (A)	

EXHIBIT C (continued)

Information types	Time of collection	Information sources	Possible instruments	Preferred (P) and Acceptable (A) form of responses for analysis	Suggested priority
A. Students (continued)					
9. Skills a. Written communication (reading and writing) b. Oral communication (speaking and listening) and/or c. General level of skills	Start and periodically during study	Interviewer or Faculty or Students	Rating scales or Self-rating scales	Summed rating part scores (P) or Single rating score (A)	Medium to low
10. Satisfaction with educational experiences in lower-division study a. Features of program b. Progress toward objectives		Students	Opinion scales	Single or multiple opinion scores based on implied scale values	Medium
11-13. See Exhibit B (A 10-12)					
B. Program procedures. See Exhibit B (B 1 & 2)					
C. Outcomes					
1-3. See Exhibit B (C 1-3)					
4. Collegiate or professional-level skills a. Written communications (reading and writing) b. Oral communications (speaking and listening)	End of study	Faculty	Ratings	Rating scores using normatively or functionally defined points	Medium
5-9. See Exhibit B (C 5-9)					
10. Assessment of knowledge in major field or area of concentration	End of study	Students or Faculty	Standardized Tests or Survey Tests or Rating Form	Scores on standardized instruments yielding comparable scores (P) or Specially constructed survey tests (A) or Rating scores with normatively defined points (A)	Medium
11-12. See Exhibit B (C 10-11)					
D. Costs					
1-2. See Exhibit B (D 1-2)					

INSTRUMENT DEVELOPMENT ISSUES AND OPTIONS FOR SUBSTUDY C

This substudy can be viewed as the multiprogram evaluation version of the studies that individual programs might conduct for students who completed baccalaureate degree programs. However, the need to complete the entire substudy within the two years assumed to be available introduced so many problems and compromises that it is at best a "time sampling" study of baccalaureate students.

Any thorough longitudinal study of baccalaureate programs should extend over a minimum of four years; ideally, it should require eight or more years if the experience of part-time students is to be adequately reflected. The most important compromise assumed in the preparation of the information specifications was that Substudy C would be based only on students beginning upper-division work at the start of the evaluation study. This assumption was made for several reasons: (a) some nontraditional programs are designed only for students starting upper-division study; (b) entry to upper-division study is a major transition point for increasing numbers of students who start higher education at a community college, and this trend is likely to accelerate as higher education costs increase; (c) a number of four-year colleges award associate degrees when lower-division requirements have been satisfied, even though the students may plan to earn the baccalaureate degree; and (d) a sizable proportion of students in the defined substudy can complete the baccalaureate degree requirements during the term of the evaluation study.

A consequence of the assumption is that the only information about the lower-division experiences and programs for the students in this substudy will be what is included in college files (transcripts, etc.) or provided retrospectively by the students. A more serious limitation of the assumption is that there will be no information available for students who intended to earn baccalaureate degrees but terminated their studies while still in the lower division.

Because of these quite serious limitations, other options should be considered when the purposes and scope of an evaluation study are more clearly defined. One would be to include an additional substudy similar to Substudy B but based on lower-division students whose degree objective at entrance is the baccalaureate. The cross-sectional approach to the evaluation of baccalaureate degree programs possible with this additional substudy would, of course, greatly increase the scope and cost of the total evaluation effort.

A second option would be to conduct a study using students who are at or near the end of their degree work when the study is started, depending entirely on retrospective information about the entire collegiate experience. Such a study would permit follow-up on the first year and a half of postcollegiate activities and progress, which could be related to their recall of the educational experience and program assessment. Other options could be enumerated through combinations of the defined substudy and options described. The cost of the various options would be markedly different.

The remainder of this discussion deals with issues that will be important for the substudy as defined, i.e., a two-year study of students starting on upper-division work.

Issues in Student Group Definition

One important issue will be that of determining the meaning of the term "upper division" for the various programs participating in the evaluation study. The distinction between upper- and lower-division undergraduates is generally quite meaningful. Usually, students earn credits at a fixed rate, and the dividing point for upper and lower divisions can be generally defined by years completed. When students pursue studies part-time, perhaps encountering problems of fitting their schedules to the scheduled times of required courses, the distinction becomes less clear. For example, students may have earned sufficient credits to be in the upper division, but may not have been able to take certain courses required in the first two years. Or they may have earned all but a few of the necessary credits when they had to interrupt their studies for a time.

Colleges have often modified or waived certain requirements in response to these increasingly common problems. Some institutions, particularly nontraditional ones, have changed the ways in which they define degree requirements and recognize progress in satisfying the requirements. Years of residence is not a very meaningful criterion. In fact, for certain nontraditional programs the term "upper division" may be quite meaningless and even contrary to the programs' purposes.

It will be necessary to settle on a working definition for the identification of upper-division students which will allow for some tolerance limits in terms of time, credits, or completion of lower-division required courses. One-half of the degree re uire-

ments completed, however these requirements are stated by each program, may be the only criterion that can be used. As with so many issues, the definition may have to be negotiated with some programs to reflect unique program requirements while at the same time achieving reasonable uniformity across different programs.

A second issue in student group definition stems from the fact that students could be starting on upper-division work periodically during the term of the evaluation study. The implications of, and options for, this issue are essentially the same as those in the parallel comparable discussion following Exhibit B. Their resolution will require more complicated arrangements with the participating programs. Most colleges or programs would not routinely collect the preprogram information listed in Exhibit A at the time students start on upper-division work.

A special and major data collection effort will have to be set up for those students enrolled at the start of the study. These arrangements would then have to be continued periodically for students who enter the upper division at a later time. There may, then, be a substantial administrative and cost advantage to limiting the numbers of "late starting" students for whom the preprogram data have to be collected. Of course, any potential saving in costs resulting from these limits would have to be weighed against the reduction in numbers of students for whom data will be available. The loss in numbers of students will be large for certain nontraditional programs where relatively small numbers of students are at the same stage of completion of degree requirements at any given time.

Still another issue is whether the students in Substudy C who are entering the program or college for the first time should be considered as a subgroup separate from those who completed their lower-division work in the college. More specifically, a sizable proportion of students may initiate upper-division work in a program after having completed the lower-division work in another institution—a community college or at one or more four-year institutions. This proportion may vary markedly between traditional programs and nontraditional programs designed specifically for adult part-time students.

Some nontraditional programs are designed to provide only upper-division work; all the students are new to the program. Most of these programs are designed to facilitate reentry of students regardless of where and when they did their lower-division work.

This issue will go to the heart of plans for analysis of data for Substudy C. The entrance data for new and continuing students in traditional and nontraditional programs may necessarily be so different that any reasonable analysis plans will, in effect, result in separate substudies for at least four student subgroups. No speculation on whether data for the student subgroups could be pooled across programs in a single class is warranted in the absence of detailed information about the kinds and varieties of prior educational experience.

Information Content and Response Forms

As noted in Exhibit C, the program entry information types suggested for Substudy C are similar to those used for Substudies A and B. The specific instruments and resulting information would be quite different, however, simply because the students have progressed so much further in their education and have a greater variety of prior educational backgrounds.

Educational background, ability, and knowledge. More information will be needed to describe completely the preentrance educational background of students in Substudy C in ways that will permit useful grouping for data analysis. Secondary school background might be omitted entirely, but extensive information on degree-related course credits, awarding institutions, and level of achievement will be necessary.

A scheme and procedures for converting college grades and/or grade averages to a common scale will be essential. In some cases, this may require independent review and evaluation of the more unusual transcripts. The common scale may have to be one for which the points can only be qualitatively defined, or defined in very gross quantitative approximations. In any case, every possible effort should be made to arrive at a common scale. It may be, however, that no such scale can be developed because students will be found to have attended a wide array of colleges, have accumulated credits over so many years, or have been awarded credits for experiences that can in no way be considered comparable. If so, ratings of ability, knowledge, and skills at entrance listed in Exhibit C may be particularly crucial. Ratings are suggested because the use of standardized or survey tests suggested in Exhibit A to obtain this information will probably not be feasible. It may even be inappropriate in many instances. A major effort will have to be devoted to the development and tryout of these scales if they are to provide data that

will be useful in the interpretation of end-of-study information.

The New York State Regents External Degree Program has accumulated valuable experience in the resolution of the kinds of problems that have been touched on only briefly here. The procedures they are employing should be studied thoroughly as a first step in planning for this aspect of the evaluation study.

Knowledge base for upper-division study. Information type A-8 is included in the specifications to provide data for the interpretation of knowledge measures that might be collected at the end of the study. The priority for such information depends, then, on the priority attached to information about end-of-study knowledge. As indicated in the discussion of Exhibit B, such information is probably of only medium priority, so there may be less need for preprogram knowledge data than for other information shown in Exhibit C.

If such data are to be obtained, ideally one should have estimates of knowledge in both broad areas that might result from lower-division study or other kinds of learning, and in the specialized areas in which upper-division work is planned. The use of any standardized or survey tests for these purposes is quite impractical. Faculty ratings are probably the best sources of information about the knowledge base. If a choice between ratings for broad or special areas must be made, knowledge in broad areas can probably be estimated more reliably.

Communication skills. Information type A-9 has been included in Exhibit C because the methods for communication skills assessment for upper-division students will have to be substantially different from those used with students starting on lower-division work. The functional level of these skills will be important determiners of student success in upper-division work, and will also be useful in the interpretation of outcomes data. The suggested priority of "medium to low" reflects only the anticipated difficulty and cost of obtaining the information.

For those students who are continuing upper-division study in the same program or institution where they did their lower-division work, these skills can be best assessed by faculty knowledgeable about the students' work in previous courses. Such ratings will necessarily be normative for each faculty member, but it may be possible to reduce the rater variance by the use of functional descriptions to elaborate on the normative classification. An example of such a rating scale, which has not been pretested, is:

This student's speaking skills are:

1. *at least as good as the top 10% of the students I have had. He/she would be very effective in a graduate seminar course, and could speak well extemporaneously before a large group.*
2. *among the top 40% of the students I have had. He/she would make a good prepared presentation to a large group, and would be above average in an undergraduate seminar course.*
3. *in the middle 20% of the students I have had. He/she can respond adequately to questions in a class, and could give a satisfactory prepared presentation.*
4. *well below average. He/she can participate in discussions, but the points are not made very clearly and there is often confusion about what is being said.*
5. *in the bottom 10% of students I have had. Discussion is halting and usually quite confused; the student is seldom understood.*

Assessment of communication skills for students entering the program for the first time in the upper division will be much more difficult, since there are not useful tests of these specific skills at this level of education. It may be necessary to delay collection of this information for a month or two after entrance, so that faculty members will have time to observe the student.

Satisfaction with educational experiences. Satisfaction with lower-division program features and progress toward educational objectives (information type A-10) is included in Exhibit C for two reasons. First, such data may be of value in the interpretation of satisfaction and progress information obtained at the end of the study. Second, there may be important differences among students entering different programs on the opinion indicators that will be useful in pooling data for different programs. Exhibit C lists much less detail for these scales of satisfaction at entrance than is shown in Exhibit B for similar scales to be used at the end of the study. This is only because it seems unlikely that meaningful scales of opinions about detailed program features can be

developed when students will have been enrolled in such a wide variety of programs. If time and funds permit, it would be most desirable to test this assumption before making final data collection plans.

Outcomes and costs. Although information types C and D, outcomes and costs, are essentially the same for Substudies B and C, the data collection instruments may be somewhat different. In fact, the development or assembly effort for instruments other than those used to obtain cost data might usefully include the collection of data on the extent to which the instruments differentiate between upper- and lower-division students in the same program.

The end-of-study assessment of communication skills has been included in Exhibit C because of the special problems posed if these skills are to be assessed. The skills are, of course, important to future success in graduate study and in most occupations of interest to baccalaureate degree recipients; and some decisionmakers attach importance to them as outcomes indicators. It is doubtful, however, whether improvement of these skills is a major objective for most baccalaureate degree programs, or for many students who enter such programs; there is probably little difference between the minimum skill level necessary for starting upper-division work and that necessary for postcollegiate success. Hence, the suggested priority of "medium." The comments made above about skill ratings are equally appropriate here. The definitions of functional ratings probably should be related to postcollegiate settings, however. If the students have been employed on a part- or full-time basis while attending college, employers might be able to provide useful ratings for these students.

EXHIBIT D

Information Specifications for Substudy D
Alumni Who Received Degrees One to Three Years Prior to Start of Evaluation Study

Purposes of information collection	Primary users of information
1. Assess outcomes, accomplishments, and satisfaction (What happens to students after they complete their programs? How has their education contributed to educational and occupational progress and satisfaction? How well satisfied are the students with what they have learned in college?)	1. State planners and legislators, institutional presidents and deans, program administrators
2. Satisfaction with overall educational or college experience (What do graduates think of the program and experiences they had in college?)	2. State planners and legislators, institutional presidents and deans, program administrators

Information types	Time of collection	Information sources	Possible instruments	Preferred (P) and Acceptable (A) forms of responses for analysis	Suggested priority
A. Students					
1. Sex, age, and ethnic background	During or at end of study	Alumni and College records	Questionnaire and Coding form	Frequencies in defined categories	High
2. Educational background for years preceding entrance to program					Medium
3. Educational history in program a. When enrolled, completed, time in program b. Amount credit for prior learning, % degree in program c. Area of study d. Full-/part-time study					High
4. Occupational background before and during program a. Before entering program b. While working toward degree		Alumni	Questionnaire		Medium
5. Educational objectives upon entrance to and graduation from program			Questionnaire and Rating scales	Frequencies in defined categories and Single rating scores with subjective points	Medium to low
6. Occupational objectives upon entrance to and graduation from program					
B. Program procedures					
1. Assessment of program procedures and response to needs					High

EXHIBIT D (continued)

Information types	Time of collection	Information sources	Possible instruments	Preferred (P) and Acceptable (A) forms of responses for analysis	Suggested priority
C. Outcomes					
1. Postprogram educational activities: Noncollegiate	During or at end of study	Alumni	Questionnaire and Rating scales	Frequencies in defined categories and Single rating scores with subjective points	High
2. Postprogram educational activities: Upper division or graduate or professional school					
a. Application, admission, difficulties, transfer credits					
b. Area of study, change in area					
c. Rating of program preparation, performance					
d. Satisfaction with educational progress					
3. Postprogram occupational activities: Since completion of program up to current occupation					
a. Number					
b. Types, change in employer					
c. Expectations and reality					
d. Difficulties finding job, unemployment					
4. Postprogram occupation: Current					
a. Title, employer, hours, income					
b. Closeness to goals					
c. Relation to area of study					
d. Rating of job satisfaction, work values, progress					
e. Rating of program preparation, performance, circumstances as direct result of program		Alumni and Employer			
5. Ultimate educational and occupational objectives		Alumni			
6. Gain in abilities, skills, knowledge as result of program					

INSTRUMENT DEVELOPMENT ISSUES AND OPTIONS FOR SUBSTUDY D

For some decisionmakers, this may be the most important of the substudies because it is directed to assessment of outcomes as reflected after graduation. The purposes of the substudy can be easily oversimplified if insufficient attention is given to the differences among the various types of degree programs with respect to purposes and features. Ideally, the study should be done as a longitudinal extension of Substudies B and C, but such long-term studies do not seem practical as a means to provide information for decisionmaking. The shorter cross-sectional study suggested here could easily be done within the two-vear time limit.

Completing the alumni substudy within the two-year time period will require that information about, and assessment of, program related experiences be dependent on recollection. Many alumni will have had some of these experiences as much as ten or more years prior to the start of the study. Opinions about satisfaction will relate to complex and detailed program features that may have extended over many years. Dependence on these recollections may again reduce appreciably the value of the information for an understanding of differences between traditional and nontraditional programs.

The Bureau of Social Science Research (BSSR) has recently conducted a study similar in many respects to Substudy D, surveying alumni of nontraditional programs. In view of the investment already made in that study by the National Institute of Education and of the potentially high cost of Substudy D, it will probably be most efficient to concentrate attention and available funds on the other substudies outlined in this report.

Information, such as employer ratings of program graduates, not provided by the BSSR study could be obtained from Substudy D. The experience and knowledge that BSSR has gained about the conduct of a multiprogram alumni follow-up study will be invaluable in the planning of Substudy D, if it is to be done. As a result of their study, they will probably have recommendations concerning additional questions to which answers should be sought in a subsequent study.

Data Collection Cycles and Alumni Subgroup Identification

In designing this substudy, a choice between two data collection schedules is possible. The first possibility is to collect all the information listed in Exhibit D only once, analyze and interpret the data, and complete the report. This could be done any time during the two-year term of the evaluation study, although it would be preferable to do it rather early to minimize the time span for which alumni recollection would be a factor. The alternative data collection strategy is to carry out this data collection task near the start of the study, then to update information types C-2, 3, and 4 about a year-and-a-half later through a second data collection cycle.

The relative simplicity and limited costs are the principal arguments for the first of these two possibilities. It could conceivably be done within a six- to nine-month period if one were to forego the potential usefulness of data from the other substudies in the interpretation of the results of Substudy D. More important, perhaps, given the magnitude of the initial data collection tasks in Substudies A through C, there are great administrative advantages in delaying information collection for the fourth substudy until the seventh or eighth month of the evaluation study.

The arguments in favor of the second alternative rest on the value of getting a more complete picture of what has happened to the alumni. Relationships between the collegiate experiences and the documented activities and experiences during the additional time could be examined. Although the second possibility would be more expensive than the first, it would capitalize on the initial cost of locating and contacting the alumni. Arrangements for the second data collection cycle would be appreciably simpler than for the first, since the alumni could be encouraged to keep the evaluation study staff informed of changes in jobs and location after the first contact with alumni has been made.

The substudy is limited to recent alumni (those awarded degrees one to three years prior to the start of the evaluation study) because a number of nontraditional programs have been awarding degrees for only a few years; it will also be easier to locate and contact recent alumni. The limitation may also maximize identifiable program effects since there will be less variance in educational and occupational progress attributable to postprogram opportunities and accomplishments.

The choice of degree programs and students to be included in Substudies A, B, and C will automatically determine four different groups of alumni: those who received associate degrees and did not continue with formal education; those who received such degrees and continued formal education; those who

received baccalaureate degrees and then terminated their formal education; and those who continued formal education after receiving the baccalaureate degree. It is likely, however, that traditional and nontraditional programs will have very different numbers of alumni in each of these four groups. The potential cost of locating, contacting, and following up alumni will dictate some kind of stratified random sampling for most traditional and many nontraditional programs. The size of the groups for some of the nontraditional programs will require that all of the alumni be located and contacted.

The definition of strata that would be useful in sampling is not at all clear. The choices of strata will be limited by the kinds of information colleges have about their alumni, which will vary from one program to another. It is possible that the only strata that can be used are elapsed time since award of degree, age, sex, and ethnic groups. These may have little relevance to the variables of concern in the evaluation study. If most programs have information about purposes for seeking a degree, gathered at the time of entrance or almost any other time, then a scheme for classifying such data in terms that can be applied to all programs should certainly be developed for use in sample selection.

Information Content and Response Forms

The information types listed in Exhibit D are for the most part self-explanatory. Nearly all the types listed in Category A–"Students" will have to be provided retrospectively by the alumni. Separate questionnaires probably should be used for associate and baccalaureate degree recipients, with branches in each for terminal and continuing education alumni.

The important issues to be resolved in planning for information collection will revolve around (a) the priorities assigned to the information types, (b) the amount of respondent time that can be expected, (c) the amount of detail to be collected for each information type, and (d) the extent and nature of the follow-up on nonrespondents.

Most colleges have conducted alumni surveys on several occasions. Their questionnaires range from brief one-page forms asking essentially for job titles and additional degrees earned since graduation, to multipage forms covering college experiences, employment, education, hobbies, political orientation, and the like. For a multiprogram evaluation study, some reasonable compromise will have to be reached. If questionnaires are the principal instrument to be used, a half-hour of respondent time is about optimal. If telephone interviews are to be used as a procedure for follow-up of nonrespondents, an even more abbreviated schedule will be required for these alumni.

Virtually all the information listed in Exhibit D is important to a meaningful interpretation of data obtained from alumni on subsequent progress and satisfaction with outcomes as they are related to educational experience in degree programs. The suggested priorities of "medium" or "high" are related to the amounts of detail that would be obtained, rather than to the need for the information itself. Even within high-priority information types, potentially useful data detail may have to be sacrificed in the interests of maximizing the rate of response by limiting respondent time required to complete the questionnaire. It would be highly desirable to develop alumni opinion and rating scales that have useful measurement characteristics similar to those discussed in association with Exhibit A. If they could be developed they might require so much time that other useful data could not be obtained. Therefore, it may be necessary to use much simpler scales for the alumni survey than for surveys in other substudies.

No information relevant to the cost of program participation, or concerning the sources for meeting these costs, is included in this substudy. More current information would be obtained in Substudies B and C, and it seems likely that the estimates obtained in those substudies would be more reliable.

Program staff may have different priorities for information collection than those suggested. The final decisions will have to be negotiated with the program/institution staffs, since the latter will have both an important stake in the results of the study, and a crucial role in the success of the data collection effort.

EXHIBIT E

Information Specifications for Substudy E
Professional Perceptions of Programs Reported by Faculty and Administrators

Purposes of information collection	Primary users of information
1. Acceptance of degrees and credits (Will other institutions accept at face value the degrees and credits awarded by this program?)	1. State planners and legislators, institutional presidents and deans, program administrators, federal R & D program staff
2. Assessments of intellectual content, quality and rigor of program instruction, assessment and other procedures (How credible is the program to professional personnel within and outside the program?)	2. State planners, institutional presidents and deans, program administrators
3. Faculty and staff satisfaction with personal and professional development (Are there special faculty requirements or incentives?)	3. Program administrators and faculty, higher education specialists
4. Impact (What impact have these programs had on higher education practices?)	4. Federal R & D program staff, higher education specialists, state planners, program administrators

Information types	Time of collection	Information sources	Possible instruments	Preferred (P) and Acceptable (A) form of responses for analysis	Suggested priority
A. Acceptability of degrees and credits					
1. History and current status of accreditation	As appropriate for each program	College & program staff	Interview schedule and Accreditation committee reports	Interview summaries Excerpts and summaries	High
2. Approvals by institutional senates, committees, and officers			Minutes and records	Summaries and excerpts	Medium
3. Acceptance of associate degrees by four-year colleges*			Interview schedule and/ Documents	Interview summaries or Frequencies in defined categories	High
4. Acceptance of baccalaureate degrees by graduate schools*					
5. Acceptance of degrees by employers for hiring and promotion*					
B. Faculty and administrators perceptions					
1. Student ability, preparation, interest and performance	End of each year of study or end of study	Program and nonprogram faculty & administrators	Rating scales	Multiple and summed rating scales using normatively defined values	Medium

* Some or all of this information may be provided more directly by alumni as part of Substudy D.

EXHIBIT E (continued)

Information types	Time of collection	Information sources	Possible instruments	Preferred (P) and Acceptable (A) forms of responses for analysis	Suggested priority
B. Faculty and administrators perceptions (continued)					
2. Program faculty qualifications, teaching and research interests, and standards for student performance	End of each year of study or end of study	Program and nonprogram faculty & administrators	Rating scales	Multiple rating scales using subjectively defined end and intermediate points	Medium
3. Program procedures for recruitment, admissions, instruction, and uses of resources			and Interviews	and Interview summaries	
4. Total program strengths and weaknesses					
5. Extent of knowledge about program features or basis for ratings		Nonprogram faculty & administrators	Questionnaire and Interviews	Frequencies in defined categories and Interview summaries	
6. Personal and professional rewards and penalties for program participation		Program faculty	Interviews	Interview summaries and excerpts and/or frequencies by defined categories	High
C. Description of program faculty and administrator qualifications		Program staff	Interviews and/or Coding forms	Interview summaries or excerpts and/or Frequencies in defined categories	Medium
1. Educational background and teaching experience					
2. Research experience					
3. Administrative experience					
4. Other relevant experience					
D. Program impact					
1. Modification or adaptation of procedures by other programs		Program and non-program staffs	Interviews	Interview summaries and excerpts	Medium to low
2. Grants for special studies or dissemination of program procedures					
3. Publications in professional journals or books describing program practices and accomplishments				Bibliographical material	

* Some or all of this information may be provided more directly by alumni as part of Substudy D.

DATA COLLECTION ISSUES AND OPTIONS FOR SUBSTUDY E

This substudy is directed to several quite different program evaluation issues: (a) acceptability of degrees, (b) collegial perceptions of the program, (c) roles and qualification of program staff, and (d) program impact. Higher education traditionally has depended on peer judgments of professional qualifications, reputation, and productivity as a major—perhaps the major—indicator of program quality. Thus, this substudy may provide the most important evaluation information in terms of the priorities of the higher education professional community. This community is too broad, too changing over time, to be defined as a decisionmaking group. Nonetheless there can be no question that it has a very important, if nebulous, effect on decisions.

The outcome of this substudy will be the organization of evaluative judgments about programs designed to have effects on other people. Thus, it is substantially different from Substudies A-D, which were defined in terms of groups of students who are to be, or have been, affected by the programs.

In the earlier substudies, those providing the information are presenting perceptions of programs designed for their benefit, and reporting on the effects of the programs. In this substudy, program staff will provide the information by rendering judgments about the programs they may have designed or at least shaped, and nonprogram staff will express opinions about programs which in some sense may be competitive with ones in which they are active participants. In short, those people providing information for Substudy E will have interests in the programs that are quite different from those that influence the information given by students or alumni.

Substudy E is intended to collect and relate the judgments of three groups of professional personnel who can view the programs from different perspectives: (1) program faculty and administrators, (2) nonprogram faculty and administrators from the same college or institution, and (3) an independent group of professionals who were asked to evaluate the programs for an accrediting agency. The varieties of organizational structures in higher education and the nature of collegial review and evaluation are such that these distinctions in perceptions often will not be very clear when arrangements are being made for information collection at the several programs. Insofar as possible, however, the need to make the distinctions should be kept in mind as the information is collected, analyzed, and reported.

Identification of faculty and administrators from whom information is to be solicited will be an important issue to be resolved as arrangements are made for data collection. The selection process may be much more important in determining the results of Substudy E than was true for respondent selection in the other substudies. In many instances, the choices will be fairly evident once the structure of a program is known, particularly for the program administrators. The choice of faculty members will not be so obvious, particularly for programs using adjunct faculty, unless it is possible to contact all faculty members.

If information about traditional and nontraditional programs in the same institution is being collected, it may be useful to obtain ratings of both programs from the same faculty members. Faculty members in a nontraditional program could be asked to rate this and the "comparable" traditional program, and vice versa. Such a procedure will be more feasible for campus-based programs which are offered in off-campus locations than for other nontraditional programs. There should be faculty and administrators who have first-hand knowledge of both. Whether or not such arrangements can be made, an important consideration in the interpretation of faculty ratings of programs will be the extent of knowledge the rater has of a program in which he or she is not an active participant. If it were possible to get an indication of knowledge of program features, this could be an important consideration in the choice of those to be asked to provide ratings of various program features.

The information types listed in Exhibit E are essentially self-explanatory. The actual instruments to be developed may have to be tailored to each program so that terminology is meaningful. The possible analysis of data will be so dependent on the actual choice of respondents that little more can be suggested at this time.

EXHIBIT F

Information Specifications for Substudy F
Program Costs, Sources of Funding, and Financial Viability

Purposes of information collection	Primary users of information
1. Historical and/or current program cost information (How much do the programs cost? What are the one-time development costs of such programs?)	1. State and federal legislators and planners, federal research and development agencies, institutional presidents and deans, program administrators
2. Financial viability of programs (What have been the sources of funding for the development of the program? What are the sources of funds for current operations? Will the programs be able to continue operations without special federal, state, or foundation support?)	2. Same as above

Information types	Time of collection	Information sources	Possible instruments	Preferred (P) and Acceptable (A) forms of responses for analysis	Suggested priority
1. Current program costs for geographically separate units (if appropriate) and for total program a. Instructional b. Administrative c. Facilities d. Overhead e. Total	End of each year of study or end of study	Business officers, Program directors, Directors of separate cost centers	(See discussion)		High
2. Student/staff ratios for program and/or for geographically separate units a. Student/faculty b. Student/administrative staff c. Student /adjunct fa ilty					Medium
3. Program charges to students a. Tuition b. Fees c. Other					High
4. Financial aid provided to students a. Federal loans, grants b. Work-study programs c. State scholarships and loans d. Program or institutional scholarships, grants, loans, etc. e. Other sources		Financial aid office	Questionnaire	Frequencies in defined categories	Medium

Information types	Time of collection	Information sources	Possible instruments	Preferred (P) and Acceptable (A) forms of responses for analysis	Suggested priority
5. Income by source a. Tuition and fees b. Local and state taxes c. Special federal and state support d. Foundation and other private support	End of each year of study or end of study	Program director and Business officer and Program documents	Interviews and Coding forms	Interview summaries or extracts and Document extracts	High
6. History of program costs and sources of funding for program planning, facilities development, operation	As convenient	Program director and Business officer and Financial reports	Interviews and Coding forms	Interview summaries or extracts and Document extracts	Medium
7. Estimates of future income from various sources a. Short-term b. Long-term		Program director or Various institutional administrators	Interviews	Interview summaries or extracts	High

DATA COLLECTION ISSUES AND OPTIONS FOR SUBSTUDY F

For some decisionmakers, this substudy will be the one of greatest interest. Nearly all decisionmakers will have some interest in it. Frequently, cost data may be the only information used to arrive at a decision about an educational program; the decision is based on educational values and philosophy, supplemented by cost data in a very simplified form. And the viability of long-term funding of programs may determine if other decisions are necessary.

Program Costs

Two approaches to the collection of cost data were considered for Substudy F. One approach would be to collect quite detailed data on the costs of various separate features as well as the total costs for each of the programs included in the study. The second approach would be to obtain cost data only for total programs and for geographically separate units, essentially ignoring the differences in the nature and combinations of features used.

The first of these approaches is particularly appropriate for program management decisions necessary if program costs must be reduced. Analyses of the cost data for separate features in a multiprogram study could also be helpful to program administrators by identifying potential efficiencies in program procedures that might merit further exploration for potential adoption. There is a real risk, however, that so much data would be generated that a comprehensive interpretation would be virtually impossible. Interpretation of the cost data would require discussion of program features and costs out of the context in which they occurred in the evaluation study and hence conclusions could be seriously misleading. Until much more is known about the importance and effects of various program features and costs on a program by program basis, such detailed cost studies would probably be done most effectively by the staffs of each program.

The information specifications for Substudy F are based on the second of the two approaches. Total cost data should be presented and analyzed for each geographically separate unit if the cost accounting procedures employed by the sponsoring institutions treat each unit as if it were a separate program. For interpretation of the cost data, it may also be useful to break down the total costs by major categories of objective of expenditure, as shown in Exhibit F.

To obtain an overview of program costs, some important variations in the definition and computation of costs, and in the assignment of costs to various categories, must be disregarded. Such variations may be of particular importance in studies of nontraditional programs, and can be ignored only at the risk of possible misinterpretation of the cost data. State and institutional accounting practices are at different stages in responding to the accounting problems posed by the introduction of new structures, procedures and requirements of some nontraditional programs.

The problems and difficulties of doing comparative cost studies in higher education are well known. They are not unique to nontraditional education programs, but such programs frequently represent extreme instances of the problems. The problems are discussed in detail in Medsker et al. (1975), and the authors concluded that only the most general statements about costs of nontraditional programs could be made. The interpretation of comparative cost data for both traditional and nontraditional programs would require even more caution than they advocated.

To indicate the magnitude of the problems that will be encountered in collecting and analyzing data for information type 1 in Substudy F some of the most important problem areas are listed and discussed below.

Full-time-equivalent units across programs. If most courses in a program or institution meet for a fixed number of hours each week, it is possible to derive an approximation to the amount of weekly effort required for students to complete the course, or an approximation of the number of "class contact" hours between students and faculty. Using one of these or some other approximation, which is a kind of "average time per student per course," it is possible to arrive at an "average course load" if a student is engaged in full-time study for some calendar period of time, a quarter or semester. This course load then becomes the definition of a full-time student, which can be used as the basis for "unit cost" analysis. The course load of students doing part-time work can be converted to a percentage of the full-time load.

The uses of these "averages" are based on a number of assumptions. These vary from one institution to another and even among divisions of a single complex institution. Still, in the absence of any more rigorous procedures, the averages have been found to be serviceable for administrative purposes in most programs and institutions. The rationale and philosophy of most programmatic innovations require

freedom from the constraints imposed by fixed classroom hours and group instruction. The assumptions underlying the use of class hours to approximate student effort simply do not apply, especially for the programs involving selfdirected study or individualized study.

If students meet with faculty only occasionally for blocks of time, or for periodic individual study planning conferences, the initial building block for estimating total student effort is missing. Faculty contact hours represent a very much smaller proportion of the total student effort, and learning time is largely a function of individual student interest and motivation outside the program or institution walls. No meaningful assumptions can be made about the total time a student can or will devote to learning in a calendar period. In fact, for many of these programs the calendar period—quarter, semester, or whatever—is not meaningful because the student has flexibility in setting completion dates.

Nontraditional programs have adopted a variety of strategies to replace credit hours. Some can rather easily adopt at least the form of campus-based conventions, relying on individual faculty members or committees to convert assumed student effort into the credit units employed on the campus. The programs that stress individualization often have simply discarded the established credit-hour currencies and have replaced them with a completely new system for recording effort and achievement. They generally have adopted some entirely arbitrary conventions that relate their new system to other established credit-hour systems, in order to provide their students and alumni with the common currency needed for graduate school admission and occupational advancement.

However the units are derived to define full-time student effort and achievement, the assumptions on which they are based should be reviewed carefully for each program and institution. The implications of those assumptions must be assessed in relation to the use of full-time equivalent as if it were comparable for all programs.

Faculty age, length of service, salary scales, and participation in innovative programs. Faculty salaries are by far the largest single cost element in educational programs. Allowance must be made for factors affecting these costs in ways that would be biased for some programs if the results of a comparative cost study are to be interpreted correctly and used in meaningful ways.

For a variety of reasons, innovative programs are often staffed with a high proportion of younger faculty members. Academic salaries are closely related to age and length of service, with a ceiling at each rank that may be reached only after a number of years of service. Thus, faculty costs for new programs may be relatively low in the early years of the program due in part to the use of younger faculty. They may, however, increase rapidly for several years before salary ceilings are reached even if the program is not enlarged. As the life of the program lengthens, faculty will begin to qualify for higher ranks and possibly tenured positions, with resulting salary increases. However, a good many years may be required before the distribution of faculty ranks in the new program is the same as for older programs. Ultimately, successful innovative programs will have to bear the costs of a full range of faculty ranks. Thus, faculty costs may be lower for new or nontraditional programs because of the design of the program, but also as an artifact of the age of the program.

Faculty teaching versus research time. In most four-year institutions, teaching loads are assigned which take into account that research is an important part of the faculty member's job. The overall proportion of faculty time (and salary) allocated to research instead of teaching will vary across institutions according to the mission of the institution or college. It will also vary within institutions according to faculty rank, with the effect that the higher the rank and salary, the larger the proportion of time that will be allowed for research. A number of institutions include total faculty salaries in the cost of instruction, because research time is viewed as contributing to the teaching effectiveness of the faculty members, and also because in many instances there is no other way to recover the costs of faculty research time. If this is the practice of an institution, it will be necessary to distinguish between research and teaching costs incurred in faculty salaries in order to achieve some comparability across programs.

Programmatic instructional innovations are less likely to be undertaken at institutions in which research is an important aspect of the institutional mission. Faculty who have lower teaching loads in order that they may pursue research interests are also less likely to have the time required for participation in innovative programs. The calculated instructional costs of traditional programs may, therefore, include a larger proportion of faculty research time than is the case for nontraditional programs. Eventually faculty in innovative programs should and will want

some reduction in teaching loads so that they too can devote more time to research interests. In the early years of nontraditional programs, when interest in comparative cost data is highest, detailed information should be gathered for each program on the methods for accounting for research time and on the relative proportions of faculty time devoted to research and teaching.

Faculty overload, adjunct faculty, and tutorial staff. Innovative programs may have options for faculty employment not available to established or traditional programs. Some of these options will serve to reduce program costs in the first years of the new programs, but will be only temporary. Others may represent more permanent cost reduction strategies. In any case, the nature and long-term viability of the options must be considered as comparative cost data are collected and analyzed.

Most innovative programs necessarily have to start out as relatively small scale efforts; frequently they are the outgrowth of interests of faculty members who already have full-time teaching and research positions. A staff with the breadth of background, interest, and knowledge necessary for a balanced program may have to be assembled quickly. To accomplish this, faculty are often recruited to assume responsibilities in the new program in addition to their full-time loads. Payment for this additional teaching load does not have to include benefits and may not carry with it allocations for various indirect costs which are fully absorbed by the regular salary payments. Thus, the costs of these "overload" services may be less than the "hourly" (or per student) rate that is paid for the onload services of the faculty when teaching in traditional programs. In effect, the innovative program is "subsidized" by the faculty or sponsoring institution.

Many nontraditional programs also are designed to use adjunct faculty whose principal income is derived from sources outside the program. In effect, these people also provide services to the program on an "overload" basis. In some cases, this adjunct faculty may volunteer their time because they see the service as an important part of their regular work, or they may provide their services at a cost lower than the rate of pay for their other occupation. If the arrangements for these or similar services (i.e., the same kinds of services but not necessarily the same individuals) can be considered to be permanent, then the costs will be unchanged. If, however, volunteers eventually have to be replaced by paid adjunct faculty, or if needs being met by adjunct faculty increase so that employment of full-time faculty is required as the numbers of students increase, then the costs of these services in the early years will be underestimates of future costs.

Finally, it is often both desirable and possible to provide individualized instruction, particularly in skills development, by employing qualified but lower paid tutors rather than professionally trained faculty. While this same option may be available for traditional programs, they may not be as free to pursue it because of commitments made to professional faculty. The employment of tutors in established traditional programs may be dependent on funds that must be used for regular faculty salaries.

Telephone, mail, travel and media costs as instructional costs. Innovative programs frequently use faculty in new roles that require closer faculty/student relationships. These roles reduce the time required for campus contact with groups of students, but make increased use of communication channels not traditionally associated with instruction. If the use of these channels entails large costs, it will be necessary to include these costs as part of the instructional costs for nontraditional programs.

Individualized instruction will often require less faculty time for face-to-face meetings with students because the student has a larger responsibility for the learning that occurs. As the student progresses in the planned study, extensive review, advice, and redirection may be useful, but distance from the campus may preclude face-to-face contacts. However, periodic lengthy telephone conversations or correspondence may be required in lieu of these on-campus contacts. The time required of the faculty member for this extended consultation will be great, and it is the kind of time for which it is difficult to assess charges. Further, there will be disproportionally higher costs for mail, telephone services, and secretarial support, all of which are integral parts of the costs of instruction.

Other nontraditional programs may rely heavily on the use of various kinds of media presentations (tape cassettes, film strips, etc.) in lieu of classroom lectures and discussion. The materials are not used to supplement instruction, as is often the case in traditional programs, but to replace classroom instruction. Thus the costs should be included as direct charges for instruction. Account should be taken of the fact that supplemental media services provided for traditional programs are not required for some nontraditional ones.

Finally, extended degree programs may require frequent faculty travel to geographically separate locations. Such travel is necessary for traditional programs, of course, but the students do the traveling and pay the costs. Faculty and administrative costs for travel have to be charged to the programs, but any cost analysis interpretation should consider the fact that the total cost of instruction for a group of students may be reduced appreciably by the great reduction in private travel costs.

Cost classification for specialized program services. If innovative programs are designed in part to attract students not reached by traditional programs, specialized noninstructional services are often required. Frequently, these services are provided by traditional programs as well, but the services must be delivered in different ways by different kinds of personnel if they are to be effective for nontraditional programs. Programs and institutions differ in the classification or assignment of costs for these services, and often they are not included as instructional program costs.

As an illustration, all colleges have active publicity and student recruiting services, which frequently require travel, student interviewing, and presentations to off-campus groups. The costs of such services may be generated by public information, admission or other offices, and assigned to administrative services or institutional overhead. They may be partially or fully recovered through application or registration fees, or from public funds provided for institutional administration. If so, they are not usually included in the costs of instructional programs offered in a department or school within the college or university. An innovative program may require essentially the same services, but they must be directed to potential students not reached by the ongoing institutional services. New publicity materials specific to the program and clientele are needed, and additional specially selected and trained staff are required. The costs for these new materials and staff will not be offset by any reduction in costs for services being provided by the college, and may be very appropriately charged to the new program. Any comparative cost analysis should, however, make allowance if established programs receive similar kinds of services "free."

As another illustration, admissions and/or registrars offices usually spend sizable amounts of time and money collecting, reviewing and processing transcripts, letters of recommendation, admission test scores, and so on for new students. The costs for these administrative support services are seldom assigned to instructional programs or recovered through tuition charges. Some innovative programs require similar kinds of information but the information is used as an integral part of the instructional process. Transcripts and other information provided by entering students are reviewed and evaluated as part of instructional program planning. Faculty time may be devoted to assisting the students in the assembly and preparation of summaries of prior learning. In short, the entire entry information collection and processing are part of the instructional program, and costs should be assigned to the program.

One more example may be helpful in illustrating the ramifications of these issues for comparative cost studies. Students who are starting or resuming higher education after a long lapse often want some special orientation or assistance to get "back into the swing" of academic work. Others who are undertaking degree work as a prelude to starting a new career or changing occupations may want advice and counseling about career requirements and choice. In some highly innovative programs, all entering students may need extensive orientation by faculty and staff to the requirements and procedures of the program. These will be markedly different from those with which the student is familiar from past experience. Orientation and a variety of counseling services are generally provided by colleges for all students. The orientation is often quite brief and frequently is the responsibility of administrative staff and students. Counseling services may be available in many different places—student health services, placement offices, psychology department clinics, etc.—but are seldom located in academic departments or programs. The assignment and recovery of costs for the services is equally diffuse. The provision of orientation and counseling services in the context of a new program will generally not result in a reduction in the need for such services which are generally provided by a college or university. In other words, the new services will generate "add on" costs attributable directly to the creation of the new program. Hence, a comparative cost study must recognize that similar services are provided to all established instructional programs, but the cost accounting system might not charge traditional programs for them.

Space and equipment costs. When new programs are offered in off-campus locations, the allocation of costs for space and equipment usage, which is never a simple matter, can create a number of complications

for the interpretation of comparative cost data. Space for such programs may be rented or obtained from other institutions or agencies (e.g., high school buildings, community center buildings, libraries, or other colleges) with or without rental charges. Seldom, if ever, is any capital construction or purchase involved; whatever the costs, they would generally be treated entirely as current operating expenses.

On-campus programs, on the other hand, most often make use of capital buildings and equipment. The construction costs of some of these buildings may have long since been fully amortized, so the only current operating charges are for building maintenance and operation. The costs of other buildings may include interest and bond retirement charges in addition to maintenance and operation. Sometimes the capital costs are obligations of the state and are met from general revenue funds which will not be reflected in current operating expenses. The most common practice is probably that of aggregating all debt service, maintenance and operating expenses for a campus and prorating them to departments or programs on the basis of total costs of one kind or another. In any event, the charges made to an on-campus program may be appreciably different from the charges which would be made if similar space had to be rented off-campus.

The extent of variation in the kinds of space charges incurred by different programs, and in the accounting procedures used to assign these costs to programs, is so great that it may not be sufficient simply to note that these variations exist when interpreting comparative cost data. Some standard rules for adjustment of the charges may be required to achieve an approximation for cost comparisons.

Cost accounting and costing models. This partial listing of problems and issues that must be dealt with in comparative cost studies only suggests the magnitude of the problem. The list could be expanded almost without end if all the possible variations in cost accounting practices for different programs and institutions were considered.

It seems very likely that no study is possible if actual cost data were used for each of the programs to be included in the study. There are, however, a number of cost models for higher education which have been developed to apply common methods of classification and analyses and which use best estimates provided by colleges or programs for various kinds of costs. The use of such models as the basis for a comparative cost study may be more fruitful than comparisons of actual costs because the errors attributable to variations in accounting practices may tend to average out over the large number of cost items. Clearly, a great deal of experience will be required before any conclusions about the utility of costing models can be drawn.

Student/Staff Ratios

Information type 2 is included in Exhibit F as a second, much cruder indicator of costs. Personnel costs can account for at least 70 percent of total program costs. These ratios may therefore be useful as approximations to the *relative* costs of programs, since they are free of many of the program-to-program variations in accounting procedures discussed above.

Other Information

Information types 3 and 4 could be useful in the interpretation of data on private costs to students, and possibly in the description and understanding of various program differences.

Information types 6 and 7 are closely related, and seem essential if long-term financial viability of programs is of interest.

4. Conclusions and Recommendations

We have presented preliminary specifications for the information necessary to meet high priority needs on which there appears to be some consensus among decisionmakers. In preparing these specifications, we have given attention to the feasibility of collecting such information, and have limited the specifications to the minimum information necessary for adequate interpretation of data that might be collected. This required numerous compromises which could well be debated. It seems clear that the total study implied in this report would be too large in scope to be undertaken in the reasonably near future.

During the preparation of these specifications, we reached a number of conclusions about approaches to the important task of independent or external evaluation of traditional and nontraditional degree programs. Some of the judgments we formed as a result of previous work were reenforced. We are limiting ourselves to a few crucial recommendations, recognizing in every case that there are alternative courses of action that could be presented forcefully.

> 1. A separate and major effort in instrument development should be completed at least through a pretest stage before any plans for a multiprogram evaluation study are made.

The need for instrument development in advance of detailed study planning is particularly important in the context of an evaluation study of the magnitude of the one presently being considered. The traditional approach to evaluation instrument development cannot be justified. The cost of the study will be too great to simply incorporate instrument development as a task in a total study plan.

> 2. The instrument development effort should not be initiated without a prior systematic review of the progress and schedule for relevant projects now being carried out independently.

We have become aware of a number of projects now going on that have great potential value for a multiprogram evaluation study. Some may result in usable instruments in one or two years; others may require more time. Particularly relevant development work is being done by the American College Testing Program, Bureau of Social Science Research, Educational Testing Service, Empire State College, and the National Center for Higher Education Management Systems. The projects are being variously financed by the Fund for the Improvement of Postsecondary Education, the National Institute of Education, and nongovernmental sources. A number of colleges and universities are also embarked on similar efforts, using their own funds to solve their own problems. These program-specific efforts may provide at least prototypes of instruments that could be useful as a base for the development of instruments for more general use in an external study.

Coordination and even some joint planning of these efforts with attention to the external evaluation of programs using common instruments is greatly needed. The task will be so complex that the creation of a consortium of public and private institutions and

funding agencies might be required both to coordinate ongoing efforts and to identify important instrumentation needs not now being addressed.

> 3. There is a great need for well developed and tested devices to assess postcollegiate occupational and educational progress in relation to collegiate experience and outcomes.

Most of the effort to develop better indicators of the quality and results of collegiate experience has understandably been directed to the assessment of knowledge and skills. The recent emphasis on competency assessment has renewed and redirected these efforts, but they are still focused on cognitive and behaviorally definable short-term outcomes. At the same time, many decisionmakers now view these outcomes only as means to more important ends of personal and career success and satisfaction. These ends are, however, stated in only the most general terms, and the assessment of student status or progress with respect to these goals reflects their imprecise definition. The most frequently used approach is to provide a limited number of such statements, and ask people to indicate status by choosing a descriptive word or phrase that can be defined only subjectively by the respondent. Such forms of response are limited in their usefulness for analysis. Generally they do not provide sufficient discrimination among people or programs to support any conclusions about the effectiveness of different programs in meeting the needs of clearly different groups of students. It is necessary to develop opinion and rating scales that provide more definitive statements of outcomes and less subjectively defined forms of response.

This recommendation should not be taken to imply that the assessment of cognitive outcomes of collegiate experience is not of crucial importance. Rather, a parallel effort to define and measure more accurately some of the longer-term outcomes is needed. The effect of college attendance on success and satisfaction in both personal and societal terms should be a primary concern of decisionmakers at all levels. The question is too important to be dealt with only casually in evaluation studies. Well developed and tested opinion-and-rating scales are sorely needed.

> 4. Survey or broad-band instruments for the assessment of cognitive or competency outcomes should be developed to reduce the dollar cost and required student time for program evaluation.

Historically, much of the test development in higher education has been designed to aid in student selection, diagnosis, and placement. This has necessarily required the use of relatively long and costly instruments that will yield scores reliable enough for decisions about individuals. Program assessment does not require such extensive information about each individual. The use of shorter tests, perhaps combined with item sampling techniques, would in many cases be entirely sufficient.

> 5. Rules or criteria for the determination of comparable programs should be developed prior to the design of any evaluation study. Such rules should encompass not only comparison between traditional and nontraditional programs, but also comparisons among programs in each of these categories.

During a period of declining resources for higher education, decisionmakers must choose to fund some programs and terminate others, regardless of comparability. This dilemma is implicit in decision-oriented evaluation. It can be resolved only if boundaries can be established within which different programs will be considered to be comparable for the interpretation of information not specifically dependent on particular program features. Tolerable boundaries for acceptable comparability should be established early in the study planning phase as a guide for detailed data collection and analysis planning.

Programs are designed by institutions to provide services consistent with the institution's purposes and needs. These programs are used by students in ways that will meet student needs. The rules for determining comparability of programs, then, could be based on the programs as designed and described by the institutions, or as they are described by the students for whom they are provided, or on a combination of student and institutional purposes and plans. The last two of these three require information which could be obtained from an evaluation study, but which preferably should be obtained prior to a formal study to avoid confounding the application of the rules and the interpretation of the data used for comparisons.

> 6. Rules or criteria to determine the inclusion or exclusion of innovative

programs in a multiprogram evaluation study should be established.

One of the greatest threats to innovations is the premature evaluation of their effectiveness. Any innovation that is worth trying requires time for trial-and-error learning. Innovative programs should not be expected to have achieved their major goals and objectives in a short period of time, even though funding proposals and requirements may force the staff to make high-sounding promises. Certainly, if programs are to have a relatively long life they should not be evaluated (except for formative evaluation) until the novelty of the program and the sense of exploration and commitment of the original staff are themselves no longer important program features. Additionally, any useful summative evaluation study should attend to some of the postcollegiate effects for students enrolled after the program has been stabilized. If alumni are to be included in a multiprogram evaluation study, only programs that have graduated at least five "classes" should be considered.

Program size and the acceptability of the important features within the boundaries of comparability discussed above would also be factors to be considered in establishing these rules.

7. Any plan for a large-scale multiprogram evaluation study should be pretested on a small scale before the total plan is put in final form and arrangements for implementation of the plan are made.

An evaluation study of the scope implied in our information specifications will be too difficult and expensive to undertake without a small-scale empirical tryout of the plan for the study. However carefully the planning may be done, the problems that will be encountered will be too numerous and complex to be anticipated and thought through to successful resolution. The evaluators' learning process about the details of unanticipated problems and acceptable solutions should not be part of the evaluation of the programs. The importance of the study to the programs and the total cost of the evaluation study require that a pilot study be done in advance.

If this recommendation is accepted, we suggest that no evaluation study more complex than a combination of Substudies A and B (associate degree students, including dropouts and transfer students) be undertaken for a pilot test. We would suggest further that such substudies include no more than three nontraditional and three traditional programs. Such a limited study could provide some data for tentative and limited conclusions about the effects and uses of these programs and others quite similar to them. It would be more than just a number of institutional or program self-studies. Their primary value, however, would lie (1) in the experience gained in the use of the instruments, (2) in the problems and issues to be resolved in making arrangements with the institutions, and (3) in understanding the data interpretation problems when data are collected from a variety of programs.

8. Initiatives for comparative cost studies, and efforts to develop cost effectiveness indicators for one or more programs should be separated from any multiprogram outcomes studies.

The present lack of uniformity in cost accounting practices employed in higher education reflects the institutional diversity and autonomy that characterize higher education in the United States. Colleges and universities supply certain kinds of cost data using approximately common definitions in response to requests from state and federal agencies and legislatures. The underlying causes of the variation in costing procedures are too fundamental to be dealt with merely by seeking common definitions.

Progress undoubtedly can and should be made in the conduct of good comparative cost studies. For some years to come, progress is most likely to be made if developing and conducting cost studies is approached as an area for research separated from decisionmaking which bears on the growth, or even survival, of institutions and programs. Any concerted effort to combine multiprogram evaluation and cost studies is premature until the methodology and procedures for each kind of study are better developed. If such an effort were pursued, the most likely effect would be to impede necessary prior work in both areas.

Throughout this report we have discussed issues and problems that must be dealt with in the identification of useful information and in data collection design. We must conclude the report by noting the major dilemma underlying a decision to undertake a study of the scope implied in the original request from NIE.

Good evaluation of educational programs requires thorough longitudinal studies. However, the time required for such studies exceeds the capability to

anticipate decisions required in the political arena of education. Investment in a large-scale longitudinal study is questionable when financial resources are limited, if the purpose of the study is to provide information for decisionmakers. Simpler studies using high quality but less detailed data collection devices and designs will possibly serve the purposes of non-traditional education more fruitfully.

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Appendix
Additional References and Instruments

In addition to the references cited in the report, other publications and instruments or sets of instruments were especially helpful in testing out the information specifications shown in Exhibits A through E. An examination of the instruments would be useful as a base for beginning instrument development for a multiprogram study. The instruments have been used variously in multiprogram and institutional self-evaluation studies. Some have been used by traditional institutions and others by nontraditional institutions or programs; some were designed for cross-sectional studies and others were designed as a series for longitudinal studies. Instruments for use in two-year or four-year colleges are included.

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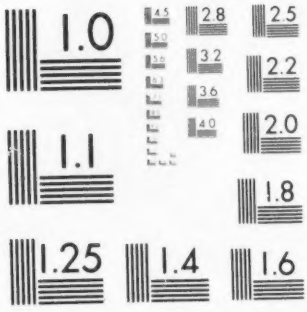

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

INSTRUMENTS

Multi-institutional

Bureau of Social Science Research, Inc., Washington, D.C.
- EDP Survey of College Graduates, 1977 (56 questions)

California State University and Colleges
- Consortium External Degree Program, Student Evaluation (35 questions and four ratings of courses)
- Consortium Faculty Questionnaire (19 questions, 2 rating forms)

Center for Research and Development in Higher Education, Berkeley
- Nontraditional Program Study
  - Student Questionnaire, 1974 (47 questions)
  - Faculty Questionnaires, 1974 (34 to 45 questions in 12 versions of questionnaires)

College Entrance Examination Board
- Student Resource Survey, 1973 (67 questions)

Cooperative Institutional Research Program, UCLA and ACE
- 1976 Student Information Form (38 questions)

National Center for Higher Education Management Systems
- Student Outcomes Questionnaires: Four-Year Colleges and University Series, 1977
  - Entering Student Questionnaire (15 questions)
  - Nonreturning Student Questionnaire (21 questions)
  - Graduating Student Questionnaire (19 questions)
  - Recent Alumni Questionnaire (30 questions)
  - Current Student Questionnaire (in development)
- Student Outcomes Questionnaires: Community Colleges Series, 1977
  - Entering Student Questionnaire (18 questions)
  - Nonreturning Student Questionnaire (20 questions)
  - Graduating Student Questionnaire (19 questions)
  - Former Student Questionnaire (31 questions)

TEX-SIS Follow-up for Community Junior Colleges, Texas Education Agency, 1976
- Student's Educational Intent (6 questions)
- Withdrawal Follow-up
  - From individual courses (4 questions)
  - From college (5 questions)
  - Walk-off (7 questions)
- Nonreturning Student Follow-up
  - Not return for subsequent enrollment (23 questions)
  - Occupational/technical students who do not return (14 questions)
- Graduate Follow-up
  - First-year Graduates (20 questions)
  - Third-year Graduates (19 questions)
  - Fifth-year Graduates (19 questions)
- Employer Follow-up (11 questions)

Institutional Self-Study

University of Colorado, Boulder
- Freshman Questionnaire (39 questions)
- Student Outcome Questionnaire for Program Completers (25 questions)
- Student Outcomes Questionnaire Supplement (21 questions)
- Alumni Survey (34 questions)

Delaware County Community College
- Confidential Exit Interview (5 questions)
- Questionnaire for Nonreturning Students (19 questions)
- Alumni Questionnaire (50 questions)

Empire State College, PERC
- Student Biographical Inventory (46 questions)
- Student Experience Questionnaire (25 questions)
- Program Completion Questionnaire (38 questions)
- Graduate Follow-up Questionnaire (41 questions)
- Faculty Questionnaire (30 questions)
- Student Rating Form (self-rating on seven areas of intellectual competence and personal development)
- Faculty Rating Form (rating of student on seven areas as above)

New York Regents External Degree Program
- REDP Participants, 1974-75 Survey (13 questions)
- REDP Alumni Questionnaire, 1974-75 (13 questions)
- REDP Baccalaureate Degree Recipients, 1976 Survey (8 questions)

Development in Progress

American College Testing Program, Aubrey Forrest, Project Director
- College Outcomes Measures Project (COMP)
  - Communicating
  - Solving problems
  - Clarifying values
  - Functioning within social institutions
  - Using science and technology
  - Using art

Educational Testing Service, Jonathan Warren, Project Director
- Academic Competencies in General Education
  - Analytic skill
  - Awareness
  - Synthesizing
  - Written communication

* U. S. GOVERNMENT PRINTING OFFICE : 1979 630-903/2698